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## *Address*

### THE RESEARCH IDEA AND METHODS IN MEDICAL EDUCATION AND PRACTICE.*


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At the present day, there exists in our country an interesting and peculiar condition of affairs in the matters of medical education and of licensure to practice,—a condition totally different from that which existed here twenty or even ten years ago, or from that which is to be found in any other country in the world. The medical observer from a foreign land—for example Germany—finds here a situation in striking contrast to that which obtains in his own country.

In Germany, twenty medical schools suffice for the needs of 60,000,000 of people,—each is the medical department of a university of which it is an intimate and integral part, and these twenty universities are all under the one central control of the secretary of education for the empire. The admission requirement, uniform for all, is the completion of the course in a gymnasium,—about equal to the completion of the sophomore year in our better literary colleges. The course of medical instruction extends over five years, and is in the hands of men who are, uniformly, the recognized masters in their respective branches, the fundamental subjects, anatomy, physiology, etc., being taught by individuals, each of whom employs his whole time and energies in investigation and instruction in his chosen branch. The relation of the medical schools to the hospitals is such that abundant clinical material can be controlled and properly utilized. The medical graduate secures his license to practice by an examination, the *Staats-Examen,* which is uniform for the entire nation, and which is conducted by its ablest teachers who give hours and days each year to this laborious but important duty, subjecting the applicant to thorough practical tests which are in harmony with the methods by which he has been taught and which really measure his ability to practice his profession successfully. The license thus procured is good throughout the empire and its colonies.

How different from this admirable system is the situation which our inquiring visitor finds in the United States! We have 157 or more medical colleges, though our population numbers only about one-third more than that of Germany, and this number has been increasing at the rate of three or four a year for the last decade. These institutions are graduating about 5,740 physicians a year, at least 2,500 in excess of any possible demand. With few exceptions, they are under no governmental control whatever; any person with the price of a charter may open a new medical school at any time and in some states may sell diplomas if he chooses so to do. Worse still, however, is the great inequality of standards which obtains in these institutions. As to admission requirements, there are schools which nominally demand little more than a grammar school education and this loosely enforced, while at the other extreme are two institutions which exact a bachelor's degree, a preparation about two years in advance of the German standard. Between these two extremes almost every possible gradation is represented. By the compulsion of the medical examining boards the required time of attendance on the medical school is now almost universally four annual sessions, but these range in length from six to nine months, a variation of thirty-three and one-third per cent. In many of these schools, the faculty is composed of the enterprising individuals who organized them or who have been given positions for considerations having little reference to their qualifications for the work to be done. In only a few schools, have the fundamental branches been placed in the hands of persons who are professional chemists, anatomists, physiologists, etc., these being, in most schools, taught by practicing physicians who not only have enjoyed no adequate preparation and possess no special fitness for the teaching of these subjects, but who have no intention of giving their energies exclusively to them. The wide diversity and illogical character of the curricula of these schools, recently pointed out by Drs. Harrison, Webster and others, make very difficult or impossible migration from one school to another, a custom which is one of the strongest features of the German universities.

The matter of licensure is in the hands of forty-five or more separate boards of medical examiners in the several states, with widely varying standards, most of them now requiring a separate examination, but, unfortunately, these examinations, for the most part are conducted by persons little qualified for that function, the statutes in some of the states expressly excluding from membership in the board, the individuals who are best qualified, namely, those who are engaged in teaching. With negligible exception, these examinations are wholly of written papers, not including tests which are in line with the modern practical methods of education. The general lack of reciprocity between the several states makes the license procured in one of no validity in any other, and this imposes great hardship on deserving and able practitioners whom circumstances may oblige to remove from one state to another.

Discovering such a heterogeneous medley of conditions in the medical system of a great and enlightened nation, would not our medical visitor inevitably exclaim that they are chaotic, and impossible? And could we logically gainsay the justice of his criticism?

* Address to the graduating class at the Commencement Exercises of the Medical Department of the St. Louis University, 1905.

This condition of affairs has brought into disrepute the diploma of the American medical college throughout the world, because it has been known that the degree from some of our medical colleges signifies almost nothing in regard to the qualifications of the holder; yea, more, that there have been colleges in this country, with as high sounding titles as any, issuing parchments of gorgeous appearance with gold seals of imposing size, in which a medical diploma could be bought outright, the purchaser never having spent an hour within the walls of the institution. It has lowered the tone and status of the medical profession and has deprived it of the political and social influence which it should possess, by reason of the dignity and importance of its mission in the world, and which, in other countries, it does possess. The standing of any calling in the community is estimated not by the character and attainments of its ablest but by the quality of its average members. The ranks of the profession have become greatly overcrowded, the ratio of physicians to population being nearly twice as great in America as in any other country in the world. Recently there were examined by one board in a quarterly examination, 420 candidates. Perhaps the most serious evil growing out of our present situation is the harm which is being done to the present generation of medical students, hundreds of whom are each year being launched into a difficult and exacting career with a preparation utterly inadequate. These are the individuals who most of all are going to suffer hardships, disappointment and failure. Of the difficulties and embarassments growing out of our nondescript system of non-reciprocal licensure, it is perhaps unnecessary to speak at further length. In some respects it is the most difficult problem which presents itself. Not only does the absence of reciprocity impose a serious and unwarrantable hardship on the older physician, but there seems great danger that in the effort to bring about reciprocity, the several boards of examiners, composed of well-intentioned but not always wise or properly informed members, may, with the large power which they possess, place great obstacles in the way of the real and continuous progress of the medical schools.

This unflattering sketch of the medical conditions in America is not overdrawn, but, fortunately, there are some encouraging features in the present situation which give promise of a sure, and, let us hope, a speedy improvement. The wide discrepancy in the character of our medical schools is due to the great advance of some and not to the deterioration of any. None is worse, perhaps not so poor, as some which existed twenty years ago; while some of them may be fairly counted in the first rank of the schools of the world. Several agencies are actively engaged in earnest efforts to improve the situation. Among these are the several examining boards, combined in two organizations, the National Federation of Examining Boards, and the American Confederation of Examining and Licensing Bodies; the Association of American Medical Colleges, which has been trailing along in the rear of the progressive movement for several years, gives some faint promise of at least maintaining a firmer attitude for higher standards. Recently, the American Medical Association, now a splendid and powerful organization, originally founded chiefly for the purpose of advancing the standards of medical education in America, but having withdrawn from active participation in this movement several years ago, has renewed its active interest and has created a Council of Medical Education which promises to be a very useful and efficient factor, especially by co-ordinating the various other agencies which are seeking the same end. Fundamentally, however, the demand for this advance, the real impetus, must come from the medical profession itself, and in this regard, our hope rests mainly on the present and coming generations of medical graduates. The progress in the medical sciences and in methods of medical education has been so rapid in recent years that it has been quite impossible for the average practitioner to keep in touch with it. Few of the older physicians realize how inadequate would be the methods by which they were educated and the standards which obtained in their student days, to meet the great and increasing demands of the present time. It is to such men as you, gentlemen of the graduating class, who have been made familiar with the present state of the medical sciences, that the profession must look for an appreciative and intelligent effort to improve the present conditions. In many ways, these matters are of immediate and vital concern to you as individuals and as members of our great profession.

I have chosen to present in this address a measure which would do much to solve the difficulties above described, and that measure is the general acceptance and introduction into the American medical colleges of the ideas and methods of research. It is not offered as a panacea for all the ills of our body-medical, but I believe it would do more than any other one thing to improve the standards of medical education and practice, to elevate the tone of the profession and to unite and strengthen it as a body of scientific men.

Research is defined as "diligent, protracted investigation especially for the purpose of adding to human knowledge; studious, laborious inquiry. Specifically in science, a systematic investigation of some phenomenon or series of phenomena by the experimental method to discover facts or to co-ordinate them as laws." President Gilman has objected to the word "research," originally proposed by an English scholar, Dr. Appleton, as not a "felicitous term," and, etymologically, it is open to criticism. It has come into such general use, however, that it is pretty certain to continue as the accepted designation, though doubtless other phrases which have been suggested, such as, "the advancement of knowledge," "creative action," "constructive scholarship," "original investigation," etc., are more comprehensive and definite.

Research as an individual pursuit and accomplishment is as old as human progress. From the time of Hippocrates, medicine has been blessed with a continuous line of investigators and to the patient, persistent and deliberate search of these earnest, inquiring minds we owe the vast stores of medical knowledge which we possess to-day, for the facts which have been discovered by chance are so few as to be of no practical account. All the great names which we honor in the history of medicine are the names of investigators. Hippocrates, Galen, Vesalius, Harvey, Ambroise Parè, Boerhaave, Laennec, Louis, Trousseau, Virchow, Ludwig, Liebig, Hoppe-Seyler, Sydenham, Hunter, Gross, Flint, and the host of others whose names are immortal, were all seekers after and contributors of new knowledge. In all ages there have been men—teachers of medicine, who were profoundly versed in the knowledge of their time, yet who made no additions to the store of facts. Of wide reputation as were many of these men in their

time, their names are with rare exceptions forgotten, as are those of the great performers in music of past generations, while the name of the composer of even a single great musical creation, obscure though he may have been in his own day, lives forever.

While research as an individual accomplishment is ancient indeed, its recognition as the chief and most necessary function of the institutions of higher learning, is comparatively modern. Though the majority of investigators in past centuries have been members of some university and have accomplished their discoveries within its walls, these researches were regarded as quite apart from their function as teachers. The obligation of the university to support investigation as one of its most important and vital functions may be said to have had no large recognition until the reorganization of the German university system after the Franco-Prussian war. In the rehabilitation of these institutions at that time, great prominence was given to this feature and abundant support was provided for it. The idea was transplanted to American soil by President Gilman in the plans for the Johns Hopkins University, inaugurated twenty-eight years ago, and from this center has spread rapidly and widely to other American universities. And what a revolution it has wrought in our educational ideas and methods! No institution to-day pretends to rank as a real university in which original investigation is not being carried on and supported in some or many branches of human knowledge. The relative greatness of such an institution, as determined by scholars and those who are best qualified to judge, is proportionate to the amount and character of its productive work along investigative lines, rather than by the number of its students, the number and magnificence of its buildings or the magnitude of its endowment. What has made Germany the Mecca of all inquiring medical, as well as other scientific men for the last thirty years? Nothing but the fact that in the German universities were to be found the leaders—the masters in the medical and scientific thought of our time; and they were masters because they were investigators provided with every opportunity for research and with freedom to pursue the truth without let or hindrance whithersoever it might lead. What has made the Johns Hopkins Medical School the recognized center of progressive and stimulating medical thought in this country, excepting that conditions have there prevailed similar to those in the German institutions?

"But," it is often contended, "while such institutions have their place for the training of medical investigators, and of the select few in the profession, it is the business of the ordinary medical school to train men for the practice of medicine; and as such it has no concern with research." These sentiments are expressed in an address recently delivered before the alumni of one of the eastern medical colleges. Referring to the high requirements for admission now demanded in some medical schools, the speaker said: "As a basis for the conduct of research work, literary preliminary training and a knowledge of modern languages may be regarded as imperative, but for the fulfilling of the ordinary duties of professional life to the public, these higher requirements are still held in abeyance." And again he said: "A distinction ought to be made, however, between those institutions which are using the laboratory method as a means of elementary instruction in connection with medical colleges, and the universities that offer unusual laboratory facilities in which specialists may do research work. The medical college laboratory needs only to be practical from the student's standpoint. The laboratory for research must be unusually and specially equipped. The end to be attained in each case is so entirely different that it is unfair to compare the laboratory of the one with that of the other."

It is this narrow conception of the so-called "practical" in medical education and practice, the idea that the student who is to become a physician, in the ordinary sense of the word, needs any less thorough or scientific preparation than the research worker, which I wish earnestly to combat. The true physician is a research-worker every day of his life, in the study of every case that comes to his care, and the best possible preparation for his work is exactly the same preparation which is needful for the investigator, in the largest scientific meaning of that word. This fact has already been abundantly demonstrated by many schools and by the many graduates of these schools. The research idea, as applied to medical teaching, is not a mere theory, an academic proposition, but a demonstrated, feasible and advantageous method. The real question is simply this, is it applicable to all medical colleges?

It will naturally be asked: "Just what is implied by the research idea and method as applied to medical education?"

First, we may say, the full recognition of the fact that research is a legitimate and necessary function of every medical school. The faculty of such an institution is in duty bound to make contributions to the world's store of facts, methods and principles. To this end, it must number among its members, especially in connection with the fundamental branches, men who are devoting their time and energies exclusively to research and teaching. Only in this way can there be secured men who are competent to instruct students. Whatever may have been the case in the preceding generations, in our day the real masters of any branch of knowledge are uniformly those who are contributors to that science, and not merely transmitters of the knowledge of previous workers.

We need such men, moreover, in the clinical branches, men who, relieved of the burdens of ordinary practice, and supported by adequate salaries, are able to devote their entire time to the study of hospital cases, and to the exhaustive investigation of disease in the hospital ward and laboratory.

Second, these men must not only be given a livelihood, but they must be provided with suitable material and appliances, and with adequately trained assistants. All this means expense, and large expense, too; a cost altogether too great to be borne by the student, the expense of whose instruction has already reached the limit of his means. Moreover, as the fruits of this research are to be enjoyed by the community it is proper that the cost should be borne by the community through private endowment or by the aid of the state.

The connection of the medical school with a university is exceedingly desirable, indeed, almost an imperative need. So far as research itself is concerned, some of the very best work has been in small institutions, and, for that matter, entirely outside of any institution whatever. The intimate correlation of the several sciences, of late becoming more evident, and particularly emphasized by the scientific congress which met

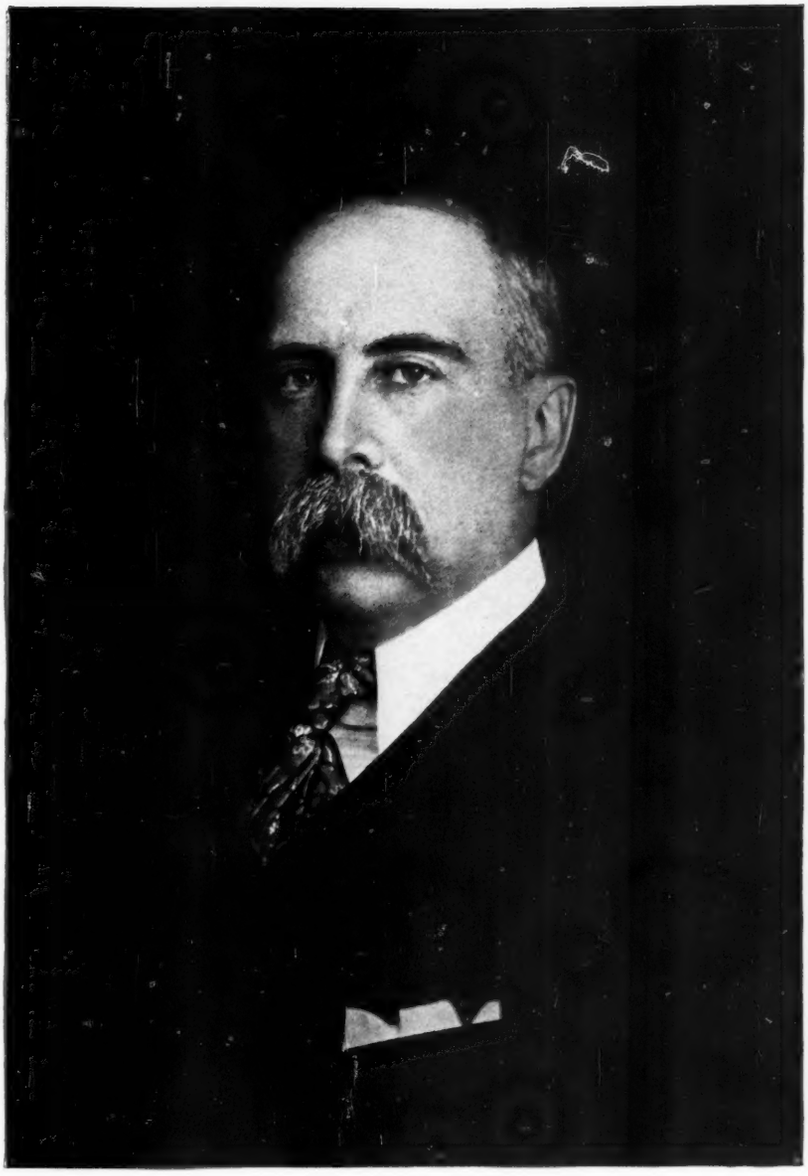
in St. Louis last summer, however, makes it of advantage that workers in anatomy, physiology, embryology, bacteriology, pathology, etc., and not less in the clinical branches of medicine, should be in close relation with those who are expert in other sciences, especially physics, chemistry and the other biologic departments.

The medical school almost of necessity must be a university department if it is to receive large endowment either by the state or at the hands of private individuals. It is true that in Pennsylvania the legislature has lavished money with prodigal hand on the private medical institutions of that commonwealth, but the system is a bad one, and is not likely to be followed elsewhere. Private donors are little likely to give large sums to an institution members of whose faculty constitute a majority of its trustees and who may vote themselves all of its income in salaries if they choose so to do, but with what confidence may not the university ask for large sums for its medical department? Its substantial and disinterested board of trustees, composed of the members of a great church or of business men of proved integrity and judgment, is as certain a guarantee as can be offered, that all its funds will be wisely used. What department of the university can present for consideration with more firm assurance than that of medicine its great needs and tremendous possibilities, or make a stronger, more telling appeal to the average man of affairs? One would not for a moment disparage those lines of investigation which seem remote from immediate human needs; all truth-seeking is worthy of support. A wise university president has recently said, "No knowledge of substance or force, or life is so remote or minute, although apparently indefinitely distant from present practice, but that to-morrow it may become an indispensable need. It cannot be predicted at what distant nook of knowledge, apparently remote from any practical service, a brilliantly useful stream may spring. It is certain that every fundamental discovery, made by the delving student, has been of service to man before a decade has passed." The imaginary antithesis between the theoretical and the practical is vanishing, as Mr. Putnam, the Librarian of Congress, has admirably shown in a recent address. While, therefore, the claims of any department of human knowledge for the support of its investigators should receive the support of every intelligent man, we may properly enough recognize the fact that to the average man of affairs, there will appeal with especial force those lines of research whose practical bearings are readily demonstrated, and what a world of possibilities are already opened up along medical lines! Calling to mind the thousands and thousands of lives which have been saved by the discovery of the antitoxin of diphtheria—a fruit of the purest sort of laboratory research—think of the magnificent boon which would be conferred on humanity by a similar discovery for scarlatina, measles, pneumonia, epidemic meningitis, and other infectious diseases! What a weight of suffering and wretchedness would be lifted from the race could we solve the problem of cancer! It is the research feature of medical work which appeals with especial force to private beneficence. We have in this country some munificent foundations for this purpose—the Rockefeller Institute for Medical Research, in New York City; the Memorial Institute for Infectious Diseases, founded by Mr. and Mrs. McCormick in Chicago, and several smaller endowments for similar purposes. The medical school which makes research a conspicuous feature, therefore, will be far more likely to secure pecuniary endowment than the institution which restricts itself to the work of instruction.

Yet another essential prerequisite for such a medical school as we are conceiving is a better preliminary training of its students than is now required by most medical colleges. This is imperatively demanded by the conditions of the time, for the good of the profession and the public, and for the protection of the coming generation of medical students. The sciences which lie at the foundation of clinical medicine have expanded enormously in the last twenty-five years, and during that period medical study and practice have made more progress in the direction of scientific exactitude than in all the previous centuries. There is still much that is empirical in therapeutics and even in diagnosis, but the modern progressive practitioner may now approach most of his problems by truly scientific methods, and the hope of medicine for the future lies in the direction of eliminating empiricism and substituting therefor exact methods—the thorough, accurate observation of clinical phenomena, strictly logical deduction from these observations, and the application to each case of well established principles.

To enter on the study of the medical sciences, thus conceived, comprehendingly and effectively, the student must possess a well trained mind, thoroughly grounded in the usual branches of English, Latin, history, mathematics, with a broad and thorough knowledge of physics, chemistry and general biology, and with a good training in the laboratory methods of these sciences, which do not rightfully belong in the medical curriculum at all, except in their application to medical problems. He should have, in addition to these, a reading knowledge of one modern language besides his own, especially of German. Even the best of the high school courses does not afford this preparation. The time has arrived when we may justly and of necessity demand of every person expecting to study medicine, at least two years of work, in properly selected branches, in a literary or scientific college. Bearing in mind the overcrowded condition of the medical profession in America, the large excess of graduates which are annually being poured into it; the readiness with which any earnest, energetic young man in good health, even though he be dependent on his own resources, may secure such an education as we have described; and with the certainty that his future success or failure depends more than all else on the breadth and thoroughness of his fundamental education, is it not reasonable to advance the entrance requirements of every medical school to the standard proposed? We are accustomed to speak of the admission requirements as being determined by the medical schools or by the medical examining boards; as a matter of fact, the essential requirements are really determined by the state of medical science and the conditions of the time; the colleges and examining boards simply interpret these conditions in fixing their own requirements. As this interpretation by a particular college is wisely or unwisely made, so, as a rule, will its students prosper or fail in the career for which the college is preparing them. Under the conditions now prevailing, and which are growing more exacting every year, the preparation afforded by a four-year high school course, plus two years in college, is not in any degree excessive.

To what extent should the individual student engage



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in research work during his medical course? Is it proposed that he shall spend all his time and secure all of his education by such a method? Obviously, the second question is to be answered in the negative. While the fact needs to be emphasized that the chief purpose of a medical course is education in the true sense—a training of the powers of observation and of the mental faculties along medical lines—the acquisition of many facts is essential, and for these he must draw on the great storehouse of knowledge already accumulated. The tremendous advantage of obtaining as much of this knowledge at first hand, by contact with and a study of the objects themselves, as contrasted with the mere memorizing of facts as written or spoken by others—is already universally recognized in the numerous laboratory and practical courses which have so largely supplanted the purely didactic methods of former years. For the most part, however, the student must be dealing with facts and principles already established, though he may approach these to a considerable degree by the methods of original investigation. To every student there should be assigned each year a subject for investigation in which he may actually explore the realms of the unknown by the exact, painstaking methods of research. It will give a zest and enthusiasm to his medical studies which no other plan affords. The wise selection of these topics for research and their judicious assignment among the students according to their special abilities and predilections, is a task requiring careful deliberation and discriminating judgment. The topic should be well within the capacity and equipment of the one to whom it is assigned, should be one that is really worth investigating, in order that he may feel that his results will be of value, and it should have as wide bearings as possible and thus necessitate his seeking information in many collateral topics and branches. Such an investigation need not by any means be a narrow or narrowing mental exercise. With a suitable subject, properly pursued, a seemingly small problem may bring the worker into contact with a very wide range of medical facts and principles in almost every branch of medicine. President G. Stanley Hall, in his recent book on "Adolescence," gives an interesting account of an experience of his early student days in the laboratory of a German professor, who set him to work on a frog's muscle. At first it seemed a trivial topic indeed, and far removed from the large field of study which he had planned, but presently he discovered that to comprehend the method of action of the frog's muscle, he must know thoroughly its minute anatomy and that of the surrounding structures; a knowledge of the nervous system was essential; the action of the muscle was dependent on its nutrition, and this involved an investigation of the physical and chemical processes going on within the muscle as well as in the digestive tract; a comprehensive study of the topic must include the embryologic development of the muscle, and a comparative investigation of the muscles of other animals. Few subjects of investigation if exhaustively pursued, will fail to lead one into numerous by-paths, involving the study of many and diversified facts, at first thought remote from the original starting point; and psychologically, facts thus garnered, cling to the memory, and become part of one's available classified knowledge as do those gathered in no other way.

Such a course of research work need occupy but a minor portion of the student's time, but it will imbue him with an interest and an earnestness in all his other work in a manner truly marvelous. This is no fanciful speculation, it has been observed by many teachers over and over again.

Then, too, the spirit with which one approaches his research work in the laboratory, and the methods by which he proceeds, are exactly those which the successful physician must make use of in the study and treatment of his patients at the bedside. Every case is a problem by itself, no matter how one may classify and designate the particular group of symptoms which it presents. No case of disease, exhaustively considered, is ever exactly like any other, and to the degree with which the practitioner recognizes these differences and adjusts his treatment thereto, to that degree will he be a wise and successful physician.

The union of research and instruction in the medical school is thus of advantage, on the instructional side in that it secures the highest grade of instructors, it affords almost the only basis for procuring pecuniary endowment, it necessitates a better preliminary training of the student, and it provides a method of instruction which gives a new inspiration and enthusiasm to the student, and affords the most logical and effective preparation for his life-work. Such a union is likewise in the interest of research. In the work of instruction the majority of investigators find a stimulus and an inspiration which is highly valued. Says President Gilman: "We often hear discussions as to the relation of instruction to research, sterile intellects attribute their non-productiveness to overwork, when a more acute diagnosis detects a lack of will-power; Sylvester, the great mathematician, said that his mind was never so fertile as when excited by the queries and criticisms of his pupils; and scores of our contemporaries would say so, too. On the other hand, certain minds have done their best work without any pedagogical obligations—no more absolute rule can be laid down than this—let those who have the duties of a professorship discharge them well; and those who have leisure be sure it is not wasted."

Another and more cogent reason why research must, in large measure, be combined with instruction is the fact that such a plan alone affords the investigator the opportunity to select and to train his successors. If medical research is to flourish in this country its most imperative need is that of a continuous and sufficient supply of competent investigators. The successful investigator is both born and made—and their number is very few. Not infrequently he is discovered in a laboratory, in the person of one who would least be suspected of possessing the essential qualifications. The successful conduct of some routine piece of work which has been assigned to him discloses the fact that he is endowed with the essential requirements, and careful training develops him into a ripe and successful worker; but he is one among hundreds, and the master, in order to develop a few competent successors, must have opportunity to study and to select from a large number. Institutions for pure research are useful and necessary, but it would be unfortunate—aye disastrous—both to research and to instruction if they were to be generally divorced. They must, for the most part, in the future as in the past, go hand in hand, if the best results are to be secured.

Finally, the sort of training which has been outlined, would improve the character of medical practice in this country to an immeasurable degree. The pursuit of

knowledge by the methods of the research worker develops, as do no other methods, a love of truth for its own sake, an intolerance of guess-work and of pretense, and a patient, painstaking thoroughness and accuracy in observation and deduction, which are greatly needed in this country. We have alluded to the distinction which is constantly made between the theoretical and the practical. How long must it take us to learn that the only practical knowledge is thorough, exact knowledge? A practical education is not comprised in the mere accumulation of those facts of anatomy, chemistry and the other fundamental medical sciences, which seem at the immediate moment to have a bearing on the problems of practical medicine. This might serve if these sciences would only stand still, but progressing as they are with tremendous rapidity, the knowledge of to-day may be obsolete to-morrow, and the facts and methods which now seem most remotely theoretical may be of the most immediate practical importance in the near future. The practice of medicine is applied science, and consists in the application of the principles, facts and methods of physics, chemistry, anatomy, physiology, bacteriology, pharmacology and pathology, to the study and treatment of the diseases and accidents of the living body. In the pursuit of any applied science the only logical method of procedure is to master first the fundamental facts and principles of these sciences; then, and then only, can one intelligently comprehend their application to the specific problems of medicine. Fundamentally the chemistry which the physician must know is the same as that required by the metallurgist, the analytical chemist, the pharmacist or one in any other vocation into which chemistry enters. It is only in the application of chemistry along these special lines that the methods differ. If the physician is to have a ground work in chemistry which will enable him to keep abreast with the advances in his profession, he must so master the general subject that he will be able to keep in touch with the progress in chemistry, to read its literature intelligently and to apply its frequent new discoveries in his daily work. And these statements apply with equal truth to anatomy, physiology, and the other fundamental branches.

The physician trained in such a school is sure to be intolerant of many of the abuses which have so long disgraced the American medical profession. The manner in which the profession has sold itself—nay, given itself away, to the manufacturing pharmacist, prescribing and endorsing a host of proprietary preparations of whose composition he is ignorant, is one of the most disgraceful and humiliating incidents of our profession. These enterprising manufacturers must laugh in their sleeves as they contemplate the facility with which they have induced physicians to advance their purely selfish commercial purposes by establishing their nostrums, by the petty bribery of free samples, and of blotters, pencils, paperweights, and sundry other advertising gew-gaws. It is high time that we ceased to permit these arrogant gentlemen to be our therapeutic mentors. No truly scientific physician will ever prescribe a preparation unless he knows positively its exact working formula, nor is there any sufficient reason for his prescribing any combination which is protected by a trade name. Departure from this strict rule of professional integrity and self-respect has proven a boomerang in not a few instances, when the manufacturer, his nostrum thoroughly advertised to the public as endorsed by the physician, has proceeded to assure them that his panacea was all-sufficient and that its use would enable the patient to dispense with the expensive services of perhaps the very physician who had recommended it.

Our medical literature, so much of which is anything but creditable, will be greatly purified and elevated when the profession consists of broadly educated men with discriminating judgment who will not tolerate the flabby, unscientific stuff which now makes up so large a portion of it. In this connection, may I urge the importance of a careful selection of the medical journals which will constitute a large and important part of your mental pabulum throughout your active lives. Shun the organs of the manufacturing pharmacist, or those which devote themselves mainly to the exploiting of proprietary remedies. Do not choose a journal because of its low subscription price—good medical literature, like anything else which is of good quality, must command a reasonable price and is ever the cheapest investment. If you are in doubt as to what are really the best journals, seek the advice of some older, and scientific practitioner, but by all means start out in your professional career by reading journals which are worth your while. Unfortunately, this class is not a very numerous one and the selection will not be difficult. You will find it of advantage to keep in touch with the purely scientific side of medicine by reading at least one journal devoted to anatomy or physiology, to bacteriology, or pathology, or such one of these fundamental branches as most interests you.

And lastly, may I suggest that you may with the greatest advantage start out in the career you have chosen, as an investigator, putting into practice the ideals and methods of research, and training yourselves by their daily exercise. In the early days of your practical life, when you will be blessed or troubled by few patients, select some topic in anatomy, histology, physiology, or any other department of your choice and devote a portion of each day to its pursuit. The number of such problems is legion, and abundant material for study will lie at your hand, no matter where you may locate. In the selection of the topic and the conduct of your research those who have taught you here will be delighted to assist and to advise you.

Later, as clinical cases come to you, these will naturally become, at least in part, the objects of your researches, but the training you have acquired in the pursuit of the simpler problems, where the factors were few, and more readily grouped and controlled, will be sure to make you more painstaking, thorough and scientific in your clinical work. You will have formed the habit of seeking out exhaustively every fact which can have any possible bearing on the case, of recording these observations accurately and of deducing your conclusions only when this has been done. Clinical observations so made and recorded are scientific data, and furnish the best possible material for real contributions to medical literature. Time can be found for such work even in the midst of an arduous practice if one will only order his time systematically. It is the greatest and busiest men who do find time for these things. One of the great surgeons of the world laid the foundations for his splendid career by experimental research while conducting an extremely arduous and time-consuming country practice. Robert Koch was a country practitioner when he discovered the bacillus of tuberculosis. Such investigation, even though the topic

be small and simple, serves to keep one in touch with the scientific side of medicine, and a worthy and familiar associate with the greatest men in its ranks.

Gentlemen of the graduating class, as a fellow-physician, I welcome you to the ranks of the great profession of medicine. You enter its active life at a very interesting epoch. While the profession is overcrowded there is always room at the top; never was there greater need and demand for earnest, faithful, properly trained workers. Great things have been accomplished in medicine in the last quarter century, great work is being done to-day and the immediate future is pregnant with yet greater possibilities. I wish for you the fullest measure of participation in the magnificent activity which is all about us, and the achievement of the largest possible success.

## Original Articles

# AINHUM.

### WITH REPORT OF A CASE.

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INDIANAPOLIS.

Ainhum, from the Nagos native name, meaning "to saw," may be defined as a pathologic process, the ultimate result of which is a spontaneous amputation of one or more fingers or toes, usually the little toe. This occurs through a slow but gradual circular strangulation. The disease when unchecked inevitably leads to loss of one or more fingers or toes. Generally only the little toes are affected, but cases occur in which other toes are attacked and amputated.

### HISTORY OF THE DISEASE.

The affection was first described by Clark,[1] and later by Da Silva Lima[2] of Bahia in 1866, who gave to the medical world the first complete reports of this strange malady. It was at first supposed to be confined exclusively to Brazilian territory. Since then, however, it has been reported from nearly every quarter of the globe. It has been met with most frequently on the western coast of Africa, in Brazil and in India. It is also reported from Egypt, Trinidad, Buenos Ayres and other parts of the world. The affection occurs most frequently in the negro, although cases are reported in Arabs, Musselmen and Chinese. In the United States the disease has been met with most unfrequently and I am able to find in our literature not over twenty cases reported of this strange affliction.

All these cases have occurred in negroes. Hornaday[3] reported a case in a negress from North Carolina; Horwitz[4] of Philadelphia and Shepherd[5] of Canada found cases in negroes. Evans[6] reports a case in a negro, aged 72, at Darlington, S. C.; Dr. R. H. Days of Baton Rouge, La., had a case in a negress, and Dr. J. L. Deslates, also of Louisiana, reports four cases occurring in St. James' Parish. Another case is reported from the Emergency Hospital of Washington, D. C., and Matas[7] and Isadore Dyer[8] of New Orleans have written extensively on cases observed in that city. Hyde and Montgomery, Stelwagon,[9] and others have also reported cases. So rare, then, is this disease in the United States that the records show scarcely over a dozen cases; and yet the disease is so prevalent in India that Crawford found a case in every 2000 surgical cases at the Indian hospitals. The absence of pain or inconvenience in many instances, doubtless, keeps the number of cases reported few and far between; moreover, we must take into consideration the fact that the class of persons afflicted with ainhum are seldom brought in contact with medical men. Thus it happened that in my case, complete amputation of one toe and almost complete amputation of another had manifested itself before the patient sought relief or obtained knowledge of his condition.

### SYMPTOMATOLOGY.

The disease begins almost invariably with a crack or fissure at the root of the little toe on the plantar or inner side. It may occur on one foot only, or in both feet simultaneously, or it may affect one foot after the other, as in my case. The groove, once started,

Fig. 1.—Ainhum. Case of Dr. Nelson D. Brayton's, March 1905. Spontaneous amputation of little toe on right foot. Little toe on left foot almost severed. Characteristic tumefaction and enlargement of the ball-like portions beyond constricting band.

deepens and extends gradually around the whole circumference of the toe. As the groove deepens, generally without ulceration, bleeding, or discomfort to the patient, the distal portion of the toe enlarges and may swell to twice its normal size. It becomes rounded and ball-like in appearance and may be even wider transversely than anteroposteriorly. After a varying period of time, ranging from two to ten years, the phalanx is absorbed, the blood vessels become obliterated and the toe drops off. Pain is never a marked symptom unless it occurs incidental to the liability to injury to which the dangling and now everted toe is exposed. The pain may also occur as a result of the swelling and edema of the constricted part. There may be an erythematous eruption accompanying the constriction or the ulceration due to traumatism in the latter stage of the disease. These ulcers, if they do not show a tendency to ready healing, may become quite pain-

1. Clark: Trans. Epidemiology Soc., London, 1860.
2. Da Silva Lima: American Arch. of Derm., 1880, p. 357.
3. Hornaday: Trans. Med. Soc. of North Carolina, 1881, vol. xxviii, pp. 76-78.
4. Horwitz: Med. and Surg. Reporter, Phila., 1887, vol. lvi, p. 649.
5. Shepherd: Amer. Jour. Med. Science, Phila., 1887, vol. xciii, p. 137-140.
6. Evans: Trans. Med. Assoc. of South Carolina, Charleston, 1887, p. 93.
7. Matas: New Orleans Med. and Surg. Jour., vol. xvi, p. 603; and Trans. Amer. Surg. Assoc., 1896, vol. xiv.
8. Dyer: Reference Handbook Med. Science, vol. i.
9. Stelwagon: "Text-book on Diseases of the Skin."

ful, particularly those located in or near the digitoplantar fold. This is especially noticed in the wearing of a tight shoe or in disturbing the normal posture of the toe in taking on or off the shoe.

### ETIOLOGY.

Ainhum is a disease more common in males than in females; it is rare in the latter. Thus, of von Winckler's[10] 20 cases, all the patients were males. Heredity may occasionally play some part in the affection, (Da Silva Lima,[2] Dupouy, Duhring). In Duhring's[11] case, the father and mother of the patient both had the disease. Ainhum may occur at any age but is most common between the ages of thirty and thiry-five years. Cases have been reported in utero. Le Brun reports a case at six years; again it has occurred as late as 70 years (Evans), the process lasting over fifty years.

It is a disease essentially of the negro race (it has been reported in but four whites) and occurring in tropical climates, although exotic cases do occasionally occur. A parasitic nature of the disease is maintained by some but this has not been proved and is improbable. Zambaco Pacha[12] maintains that it is an attenuated form of mutilating leprosy, but his theory lacks confirmation by other trusty observers. This is practically all we know of the etiology of ainhum. It has been asserted that the malady is due to the wearing of rings on the toes, but the disease occurs in tribes and races that never wear rings and who wear shoes instead. The flat-footedness of the negro is supposed to explain the fact that the fourth and fifth toes are more generally affected.

Injury, such as stone-bruise, has been attributed as the initial cause, and well authenticated cases have been reported in which traumatism has been distinctly remembered, but competent observers deny that habits, work, or accidents, are a feature in the causation and that the traumatism simply draws attention to the pre-existent condition.

Manson[13] states that it is considered by some observers as a trophic lesion dependent on some nervous affection. Dupouy reports the occurrence of severe loin pains at the commencement of some of his cases and the tendency of the disease to run in families. This is also noted by Da Silva Lima[2] and Duhring,[11] as noted above. The suggestion that it is a form of scleroderma or leprosy, or produced artificially by the wearing of rings or intentional ligatures, or provoked by wounds inflicted on bare feet while walking through grass, reeds or rushes, shows the variety of causes ascribed as instigators of the disorder.

### HISTOPATHOLOGY OF AINHUM.

The histology of ainhum shows it to be a direct ingrowth of epithelium with a corresponding depression of surface due to a rapid hyperplasia that pushes down and strangles the papillæ; thus cutting off the blood supply from the epithelial cells and causing them to undergo degenerative changes with fatty metamorphoses and dry gangrene.

Unna[14] gives a remarkably clear exposition of the present belief of the pathology of ainhum. He considers it a primary degeneration of the skin. "It is a sort of ring-formed sclerodermia with callous formation of the epidermis, leading to secondary total stagnation necrosis, which has a close resemblance to the artificial elastic snaring of tumors." Besides a primary inflammation with marked hypertrophy of the epidermis as indicated by the callous formation, there exists a condition of chronic inflammation.

"The horny layer is much thickened especially in the ridge-net of the epidermis, and the papillæ are consequently elongated and narrowed. The basal prickle layer is, as usual in negroes, deeply pigmented. In the papillary body, there is cellular infiltration. The papillary vessels are dilated, and the larger and deeper lying vessels of the cutis and the hypoderm show obliterating endarteritis in different stages of development. There is thickening of the membrana propria."

These are the progressive changes found in stagnatory dermatoses. When the stratum corneum becomes thickened even in small areas, as in corns, atrophy of the underlying epidermis occurs. It is to be expected, therefore, that, with this hyperplasia of the epidermis and downgrowth of the interpapillary process, the corium should show an increase of fibrous tissue and fat; that owing to pressure necrosis there should be changes in the deeper blood vessels and arteries; an increase of the adventitia or intima coats of the arteries so that the lumen is impaired, and finally obliterating endarteritis with slow gangrene. Eventually, the constricting band approaches the bone; tumefaction of the toe occurs with stagnation of lymph and fat, gradually causing degeneration of all the constituents of the bone tissue, pulp, and cutis; a condition of rarefying ostitis takes place with final disappearance of the ungual phalanx, the partial disappearance of the second, and almost always the preservation of the third. The line of the division may occur through the middle of the proximal phalanx or at the proximal interphalangeal articulation.

The pathologic points of interest concern the changes produced after the early appearance of primary inflammation. Whether this is due to a callous formation, is yet to be determined. Hence the necessity of microscopic examination of sections removed at an earlier stage than has previously been done.

Ainhum is certainly not a form of leprosy. The lepra bacillus has never been found in the tissues nor are there any other earmarks of that disease. The most acceptable view would seem to be that it is a trophoneurosis of unknown and therefore of purely speculative origin.

### DIFFERENTIAL DIAGNOSIS.

The differential diagnosis in ainhum must be made from Raynaud's disease, paronychia, neurotic ulcer, and leprosy.

In Raynaud's disease we have the history of occurrence of pain, the frequent exemption of lower extremities, the constitutional disturbances which accompany a disease which has preliminary lesions such as bullæ, vesicles, edema, etc. Symmetry of the lesions should also serve to establish a quick diagnosis.

Paronychia occurs on the ungual phalanx only; the nail is often affected.

Neurotic ulcer begins as a callosity; it is circumscribed and deep seated, occurs usually on the plantar surface of the heel or great toe, and is never located just at the digitoplantar fold of the fifth toe. It is characterized at the start by loss of central tissue and by a persistent slough ulcerating and discharging freely. In

10. Winckler: Brit. Guiana Med. Ann. Demarara, 1891, p. 88.
11. Duhring: Amer. Jour. Med. Science, 1884, vol. lxxxvii, p. 130.
12. Zambaco Pacha: Trans. International Leprosy Conference, 1894 and 1897, vol. iii, p. 468; and Bull. Academy of Med., July, 1898.
13. Manson: "Tropical Diseases."
14. Unna: "Histopathology of the Skin," p. 1114.

addition, it is painful, often the surrounding parts are edematous and a history of syphilis (locomotor ataxia), leprosy or severe injury to the cord can be obtained.

Leprosy of the mutilating type presents after Raynaud's disease the most likely point of error. Leprosy, however, is not confined exclusively to the colored race; it frequently occurs in whites. Its trophic lesions may be formed on any point of the body; not necessarily on some certain toe. Other manifestations of the disease, on other regions of the body, will certainly be present to confirm a diagnosis; moreover, in mutilating leprosy, as in Raynaud's disease, there are preliminary manifestations of necrosis, as bullæ, macules or tubercles at the point of attack where destruction is sure to follow.

A tuberculous ulcer or suppurating corn between the toes could scarcely be mistaken for ainhum.

### TREATMENT AND PROGNOSIS.

Treatment of the affection from a conservative standpoint is highly unsatisfactory. Most patients appear too late for conservative measures and only, as in my case, after the toe has nearly removed itself. In the early stages of the disorder, all observers are agreed that linear incision, curettage, excision or scarification of the constricting band is the indicated method of procedure. This, however, does not insure against a return of the malady. Salicylic acid in ointment (20 per cent.) may be applied to remove the horny layer of epithelium or this may be accomplished by wet dressings of Thiersch's solution; (saturated boric-salicylic acid aqueous solution). This will cleanse and relieve the parts from pain but is not of permanent benefit. When the disorder is of long standing or troublesome, the affected toes should be amputated.[15]

### REPORT OF CASE.

Patient.—J. V., a negro, aged 24, referred to me by Dr. Thomas Kennedy, Shelbyville, Ind.

*History.*—Ten years ago he first noticed a crack or furrow on the inner side of his little toe, on the right foot. This crack increased in depth and about six years later the toe dropped off. On his left foot, the disease first appeared about four years ago and has been steadily progressing. The toe hangs only by a thread not larger than a number 12 French sound.

The inconvenience to the patient arises when he puts on or off his shoe, and it has become necessary for him to cut away the outer portion of the shoe.

*Remarks.*—The illustration perfectly portrays the enlargement and tumefaction of the ball-like toe beyond the constricted portion; also the increased amount of epithelium and cornification over both the right and left phalangeal joints. The patient is a native of Kentucky and no history of heredity was obtainable. He sought relief on account of the pain occasioned by a small ulcer on the plantar surface of the toe.

Amputation was of course advised and performed. Bleeding was slight, and healing occurred promptly without inconvenience.

330 Newton Claypool Building.

15. Other reports of cases and references which may be consulted are as follows: Pyle: Med. News, Phila., 1895, vol. lxvi, p. 85-88. Ohmann-Dumesnil: Trans. Med. Soc. of Missouri, 1895, p. 124-137; and Medicine, Detroit, 1895, p. 202. Herrick: Phila. Med. Jour., 1898, vol. i, p. 246. Bass: Nashville Jour. of Med. and Surg., 1898, vol. clxxxiv, p. 201-206. Wolf: Amer. Jour. of Derm. and Genito-Urinary Disease, St. Louis, 1889, vol. iii, p. 3. Eyles: Lancet, Sept. 25, 1886, p. 576. Gould and Pyle: "Anomalies and Curiosities of Medicine," p. 828. Love: Gaillards Med. Jour., N. Y., 1883, vol. xxxv, p. 367-369. Heitzmann, Trans. Amer. Derm., Assoc., Chicago, 1881, vol. v, p. 49-51.

## ETHYL CHLORID ANESTHESIA OF THE MEMBRANA TYMPANI AND EXTERNAL AUDITORY CANAL.

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BALTIMORE.

The otologist performs the different operations within the external auditory canal under various difficulties. His field of operation is usually at the bottom of this deep and tortuous canal; the operations, while brief, are ordinarily very painful so that the patient is very apt to jerk his head and throw out of position the operator's carefully adjusted illumination and field of observation, resulting possibly in injury to neighboring structures. For these reasons, let alone the more humane one of saving the patient suffering, some form of anesthetic is desirable or at times even necessary.

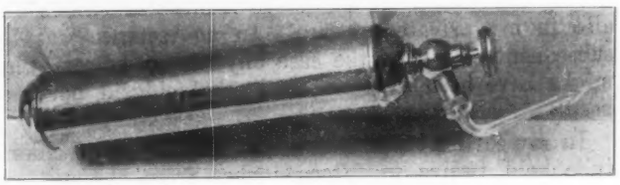

Figure 1.

Except in the case of young children or for delicate and complicated operations, the risk of a general anesthetic seems unwarranted. Solutions of cocain, or its equivalents, are absorbed but slowly and with difficulty by the skin surface of the canal and hypodermic injections are impractical for various and obvious reasons.

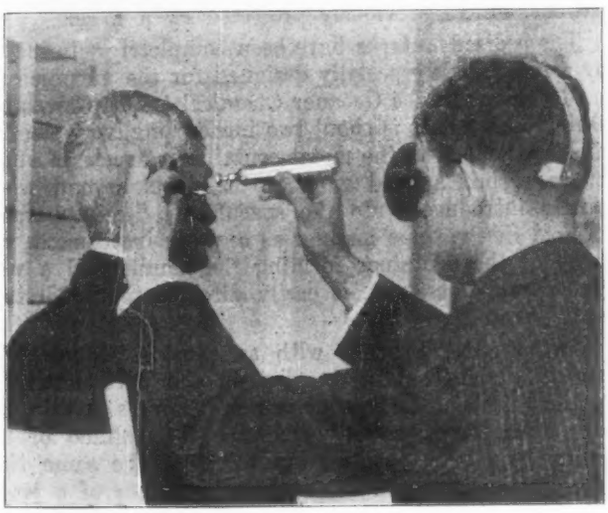

Figure 2.

A more suitable method of obtaining anesthesia in these cases is very desirable.

A very convenient and efficient means of producing local anesthesia is offered to us by freezing the part with ethyl chlorid; which, being always ready and quickly applied, forms an ideal method for office and clinical practice, since no time is lost in waiting for the anesthetic to be absorbed, as is the case with cocain solutions.

At first thought it might appear that the process of freezing may be fraught with danger and cause mis-

14. Unna: "Histopathology of the Skin," p. 1114.



chief to the structures of the middle or internal ear, or that the pain and discomfort incident to this process would offset the anesthetic qualities obtained, but practical experience has proven these fears unfounded.

My first experiment with this method was done on a patient suffering from a left facial paralysis of seven months' standing; the left ear was filled with exudate and almost deaf. The case is more fully reported by my friend, Dr. H. O. Reik,[1] who suggested a paracentesis of the drum membrane on the affected side for the relief of the paralysis. A jet of ethyl chlorid was allowed to play into the canal for some seconds and the incision was then made. With the exception of a slight burning sensation due to the ethyl chlorid nothing was felt by the patient, who was a very nervous woman. She almost completely recovered from her facial paralysis and her hearing returned to normal. Encouraged by this success, which demonstrated the harmlessness of the procedure, I have since used this freezing method on every available case that presented itself during my service at the above mentioned clinics and also in my private practice. In no instance was the subsequent course of the case any different from what might have been expected, had ethyl chlorid not been used.

In my earlier cases, I used an ordinary ethyl chlorid tube held twelve to fifteen inches from the ear and allowed a jet of the liquid to play into the auditory canal through the previously inserted speculum. This had some disadvantages. One had no assurance that the drug actually reached the desired spot and hence anesthesia was sometimes imperfect; much liquid was wasted and more than necessary was injected, producing more or less pain and discomfort to the patient, and it was almost impossible to avoid getting some of the liquid on the face or even into the eye of the patient, unless previously protected by a towel.

These disadvantages have been completely eliminated by a new nozzle especially designed for the purpose and made for me by the Gebauer Chemical Co. of Cleveland, Ohio. This nozzle is about two inches long, very slender and is attached to the metal container at such an angle as to permit a good view of the parts beyond when partly introduced into the speculum. The apparatus is held in the same manner as any ear instrument, the body of the container forming the handle and a very fine *spray,* not a jet, is easily directed to the desired spot (Figs. 1 and 2).

In practice, I begin with an almost imperceptible spray, which I allow to play on the part, until the patient feels a certain degree of coolness within the ear, then very gradually increase the volume of the spray by slowly opening the valve, at the same time facilitating its rapid evaporation by means of a jet of air blown into the canal from a Politzer bag. With a little practice one soon learns to know how far it is necessary to carry the procedure in order to obtain a sufficient degree of anesthesia. For my part, I usually shut off the spray when the patient begins to complain of an aching sensation, then blow in a little more air and operate; the whole procedure taking but a few minutes. A minimum amount of ethyl chlorid is used and none wasted, an item of some importance when dealing with such an expensive drug.

In searching the literature on the subject I find that Brieger[2] mentions the use of ethyl chlorid for similar purposes, but up to the present time have not been able to get access to his paper and am not familiar with his method of application.

In addition to the usual minor operations about the ear canal, such as paracentesis, incising furuncles, extracting polypi, etc., I have recently began to use ethyl chlorid in the manner above described as a preliminary to the application of Lucæ's sound in the treatment of chronic otitis media and find it an ideal way to avoid pain, the one objectionable feature of that form of treatment. The results thus far seem to indicate a far greater percentage of markedly improved cases than I was able to obtain before introducing the preliminary freezing; however, further experience is necessary to more fully confirm this statement, and I shall take pleasure to report on the same at a future date.

449 East Twenty-second Street.

1. Reik: "The Relationship Between Otitis Media (non-suppuration) and Facial Paralysis of the Refrigeratory Types. Trans. Am. Otological Soc., July, 1904, p. 376.

2. Brieger: Klinische Beiträge zur Ohrenheilkunde, 1896.

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## THE TRANSMISSION OF DISEASE BY THE MOSQUITO.*

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The study of the life and habits of mosquitoes, not only in their adult stage, but in their cycle of development from the egg to the mosquito, is one of the most fascinating subjects that a person who has the time could possibly take up. Not only is the subject fascinating, but it is also of great importance that the life history of all species of mosquitoes should be understood, as they have been proved beyond a doubt to play a prominent part in the transmission of disease to human beings and animals, and more especially is this true of malaria, yellow fever and filariasis.

Mosquitoes belong to the order of *Diptera,* of the family *Culicidæ.* They are differentiated from other insects which simulate them by, 1. The piercing mouth. 2. The scales on the veins of the wings. 3. The particular venation of the wings.

There are four stages in the life of the mosquito, the egg, larva, pupa and imago or winged insect. The early stage of the mosquito is always aquatic.

### EGGS.

The eggs are deposited habitually on the surface of either natural or artificial collections of water. Occasionally, however, they may be laid on moist soil, or on grass above the water, and hatch out later when water reaches them. The eggs are laid in one of two ways, either singly, each egg lying on its side (*Stegomyia fasciata*); or in a boat-shaped mass containing from 200 to 400 eggs all glued together, each egg resting on its end (*Culex*). The eggs hatch out in from 12 hours to 2 days.

### LARVÆ.

The larvæ are eruciform, and easily recognized in the water by their wriggling movements. They have a disproportionately large head. The larvæ of the subfamily *Anophelina* habitually rest in a horizontal position at the surface of the water. Other species hold themselves in an oblique position, head downward, at the surface. The larvæ remain in the larval stage about a minimum of six days, but the duration may be much longer.

* Read before the St. Louis Medical Society, 1904.

PUPÆ.

The pupæ, third stage of the mosquito, differ from the larvæ in the great swelling of the thoracic segments. They habitually remain at the surface of the water, unless disturbed, when they rapidly descend. They remain in the pupæ stage about 24 hours to 3 days, when they hatch out and become mosquitoes.

MALARIA.

The mosquito malaria theory was held by the ancient Roman writers nearly 2,000 years ago. The same belief prevailed among the peasants in certain parts of Italy and Tyrol, and among barbarous tribes in the malarial districts of Africa. Many other theories prevailed, those most generally accepted being that the disease was due to foul air, night mists, odors from swamps or marshy soil, stagnant water, upturned earth, etc.

In more recent years, we find the mosquito malaria theory advanced in a scientific manner by Americans. Dr. J. E. Nott, in 1848, discussed the question of the transmission of malaria by mosquitoes, being convinced that they transmitted the disease. Dr. A. F. A. King, in 1883, wrote a very thorough article on the etiologic relation of mosquitoes to malaria. Laveran, in 1891, and Koch, in 1892, believed in the theory, but without producing any facts in its support. Dr. Patrick Manson, in 1894, offered the most plausible theory, stating his belief that it must be carried by some blood sucking insect, and from the habits and distribution of the mosquito, he believed the disease was transmitted by this insect. Dr. A. Bignami, in 1894, was probably the first to definitely bring out the theory that the mosquito conveys the infection of malaria by inoculation.

Dr. Ronald Ross, in 1895, began to work on the mosquito theory. He allowed the insects to bite cases of malaria, but failed at that time to get his mosquitoes infected, due no doubt to the fact that he was experimenting with the culex species. In 1897, Ross tried to infect anopheles mosquitoes that he had not tested previously. On examining the insects after a day or two, he was able to find positive evidence of malarial infection in the stomach. The walls of this organ were found to contain encysted parasites (zygotes).

Dr. W. G. MacCallum, in 1897, proved that the gametocytes are sexual forms, describing the process of the micro-gametocyte flagellating and penetrating the macro-gamete. He was probably the first to recognize the true sexual process that takes place between the male and female parasites of malaria.

Dr. Ronald Ross, in 1898, followed out a series of experiments with the malaria of birds, using the culex mosquitoes. He was able to demonstrate the cycle of development of the parasite, from the time that the mosquito sucked into its stomach the blood of an infected bird, until the parasite reached the salivary glands of the insect. Later he succeeded in infecting healthy birds by allowing them to be bitten with infected mosquitoes. What Ross proved in connection with sparrow, or bird malaria, was taken up by Italian scientists, especially Prof. Grassi, who worked out a similar relation between the anopheles mosquito and human malaria. Grassi was able to trace the whole process, step by step, bringing together and applying to the human parasite the knowledge gained by previous workers in different parts of the world, until at the present time no single point in the cycle of development is incomplete.

Dr. Patrick Manson, in 1900, conducted an experiment in London, to test the mosquito-malaria theory. It was not necessary that this should be done to prove the positiveness of the theory, but it served to add another link to the already long chain of evidence, proving that malaria is transmitted to the human being by the medium of the mosquito. For this experiment insects were infected in Italy, then sent to London, and allowed to feed on two men, Dr. Thurburn Manson and Mr. R. Warren of the London School of Tropical Medicine. In each case the fever developed exactly eighteen days after they were bitten, and the benign tertian parasites were found in their blood by competent observers.

Drs. Sambon and Low, with two others, in 1900, volunteered to spend the fever season in Ostia, Central Italy, the most malarial locality in the Roman Campagna, with no protection against malaria, except to avoid being bitten by mosquitoes between sunset and sunrise, the hours during which the anopheles usually bite. This protection they secured by means of a carefully constructed hut, the windows and doors of which were covered with wire gauze, into which hut they retired an hour before sunset. They moved freely about the country during the day time. They lived in this manner for a period of three months, using no quinin or other prophylactic, and not one of the four contracted malarial fever.

A control experiment was inadvertently made during their residence in Ostia. After the assassination of King Humbert, which occurred about that time, fifteen or sixteen police agents were sent to Ostia to arrest suspected anarchists. Though these police spent only a part of the night in the district, every one of them developed fever about two weeks later.

Experiments have also been made by the Japanese army on the Island of Formosa. Two companies of soldiers were stationed in a very malarial locality. The men of one company were very carefully protected from the bites of mosquitoes, and did not suffer from attacks of malarial fever, while those of the other company who were not protected from mosquito bites suffered severely.

Many similar experiments and scientific investigations have been made, so that we now know that a certain species of mosquito is, so far as is known up to the present time, the only natural means of transmission of malaria. The anophelina mosquitoes are the intermediary hosts necessary to complete the cycle of development in malaria. In the case of yellow fever it is a different species of mosquito (*Stegomyia fasciata*) that acts as the intermediary host. The conditions necessary for the existence of the parasites of human malaria and yellow fever are only to be found in the human blood, and in the particular species of mosquito.

Mosquitoes are never born with the disease, it is only when they are given an opportunity to suck the blood of a person having malaria or yellow fever, that they become infected. The parasites have never been found in water, earth or in the air. Experiments made in different parts of the world indicate that the infected mosquito does not transmit the infection to its offspring.

To become infected with malaria, the anophelina mosquito must bite a patient whose blood contains either pigmented spheres or crescent-shaped bodies. The sporulating form of the parasite will not infect the mosquito. It requires from seven to fourteen days, after the insect has bitten a case of malaria, before it is able to transmit the infection to a human being. This period constitutes the time necessary for the parasite to go through its cycle of development, and to reach the salivary glands. It is only then that the mosquito is able to

infect. At the time of the next bite, while the insect is taking up blood with one tube, it is pouring out saliva from the salivary glands with another tube, and, with the saliva, the parasite of malaria.

A somewhat similar process takes place in connection with yellow fever, but the cycle requires at least twelve days. There is this difference, however, that to be infected with yellow fever, the *Stegomyia fasciata* must have bitten a patient during the first three days of the illness, otherwise it will not acquire the infection.

So far as we know, no other animal shares with the human being the capability to be the intermediary host of yellow fever, or of the human malarial parasite. Intracorpuscular parasites akin to malaria have been found in many animals, in cattle, horses, sheep, dogs, monkeys, frogs, bats, sparrows, finches, crows, hawks, owls, pigeons, blackbirds, etc., but the parasites are of a distinct species.

Dionisi has found a hematazoon of the bat, which resembles human varieties very much. Koch specially investigated the possibility of transmitting human malaria to the lower animals in Java. He used the orang-outang and hylobates, but failed entirely to produce the disease in these higher apes, as other investigators have failed with other animals.

Mattei injected blood of malarial patients into sixteen pigeons, with negative results. The same negative result was obtained in four instances, in which he injected the blood of infected birds into the arms of healthy men.

The incubation period of malaria in the human being, from the time of the bite by an infected mosquito, varies from two days to three weeks, depending on the particular kind of parasite, the amount of blood taken in by the mosquito, and its richness in parasites.

### OPPOSING THEORIES.

It may seem absurd to take up the reasons, or at least some of them, that are given to combat the mosquito-malaria theory. However, it may not be out of place to mention a few of the objections:

*Malarial Localities.*—It is said that certain places are malarious, in which there are no mosquitoes. I think, if careful search were made, it would be found that the malarial bearing mosquitoes were present.

*Foul Air of Swamps.*—Some infer that the disease is acquired from foul air. The gas given off from the mud of stagnant pools and swamps has been found to be a compound of hydrogen and carbon-methane, or marsh gas, which can be easily proved to have nothing to do with the malarial infection.

*Contaminated Water.*—There are still a few persons who maintain that the disease is contracted by drinking infected water. It is possible that many of the supposed cases of malaria from drinking bad water were typhoid cases. Those who have studied the malarial parasites can not understand the possibility of the germ living or propagating in water of any kind.

*Night Air.*—The idea that people get malaria, as a result of being out at night, is explained by the fact that the anophelina, as a rule, only bite at night.

*Upturned Earth.*—Epidemics of malaria are known to break out among men engaged in work requiring uplifting of the soil. In these cases the infection is no doubt due to the fact that some of the new arrivals had malarial parasites in their blood when they came, also that conditions were more favorable for the breeding of mosquitoes, on account of the new pools and ditches formed during the digging operations.

It is important that we meet wrong ideas as to the cause of malaria, by disseminating the knowledge that we now possess, either by education or by vigorous sanitary laws if necessary.

### YELLOW FEVER.

From observations made in connection with yellow fever, we have reason to believe that infection can not take place except in one of two ways, either by the bite of an infected mosquito, or by direct inoculation of infected blood. Over two hundred experiments have been made on human beings. About 128 of these experiments were mosquito inoculations; the persons being bitten by mosquitoes infected, or supposed to be infected, with the germ of yellow fever. The others were direct blood inoculations, except three. Two of the experiments consisted in making an excoriation on the skin, one centimeter square, by means of scraping and then applying a drop of virulent serum from a case of yellow fever. The result was negative. Another experiment was made, whereby a non-immune subject was allowed to drink water, in which had been triturated the bodies of four infected *Stegomyia fasciata* mosquitoes, the result being negative.

Dr. Charles P. Finlay, at the session of the Royal Academy of Sciences, in Havana, Cuba, August 14, 1881, first gave to the world his eventful theory of the transmission of yellow fever by the medium of the mosquito, reporting, at that time, a series of experiments that he had made on human beings, by which he claimed to have proved his theory. He was the pioneer in mosquito inoculations. From 1881 to 1900, Dr. Finlay, assisted by Dr. Claudio Delgado, performed over one hundred inoculations with supposed infected yellow fever mosquitoes. Time will not permit me to dwell on these experiments, I will simply read an extract of Dr. Finlay's original theory given out in August, 1881:

> Three conditions will, therefore, be necessary in order that yellow fever may be propagated: 1. The existence of a yellow fever patient into whose capillaries the mosquito is able to drive its sting and to impregnate it with virulent particles, at an appropriate stage of the disease. 2. That the life of the mosquito be spared after its bite on the patient until it has a chance of biting the person in whom the disease is to be reproduced. 3. The coincidence that some of the persons whom the same mosquito happens to bite thereafter, shall be susceptible of contracting the disease.

Dr. Finlay's theory was confirmed by the American Military Yellow Fever Commission composed of Drs. Reed, Carroll, Agramonte and Lazear. The positive results obtained by this commission, experimenting in Cuba in 1900 and 1901, proved beyond any question of doubt, that yellow fever is only contracted, naturally, by the bite of the mosquito. They also proved that contact with the patient, fomites, clothing, etc., plays no part in the transmission of the disease.

At the present time, Dr. Finlay explains the process of yellow fever infection in the following manner. He assumes that the germ is a two host, microscopic, perhaps ultra-microscopic endo-parasite of the female of a particular mosquito (*Stegomyia fasciata*). In order that it may complete its life cycle, perpetuate its species, and find its way into other healthy stegomyias, it is necessary that it should penetrate from an infected insect into the body of a non-immune person.

It appears that after the germ leaves the infected insect, and enters the body of the susceptible person, it passes through a certain cycle or evolution, requiring usually three to six days, although the period of incuba-

tion in the human being may be extended to at least thirteen days in exceptional cases.

Dr. Finlay holds that the penetration of the germ into the body of the non-immune, is intended for the accomplishment of its sexual reproduction, and that the analogy between it and the malarial parasite holds good, with the difference only, that the latter accomplishes this act in one of the anophelina mosquitoes, while the sexual cycle of the yellow fever germ is supposed to take place in the human host. He suggests the following as the probable cycle of development of the germ in the body of the contaminated mosquito:

a. Introduction of young sporozoits sucked up with the blood of the patient.
b. Growth of the sporozoits to adult age.
c. Formation of schizonts and merozoits.
d. Formation of gametes.

In the body of the non-immune, counting from the time of inoculation by the bite of the infected stegomyia, the following stages, in his opinion, are likely to occur during the period of incubation:

a. Localization of the gametes in appropriate sites.
b. Fecundation of the macrogametes by the microgametes of the yellow fever germ.
c. Formation of the ookinet, and development of the oocyst in appropriate cells (endothelial ?).
d. Discharge of free sporozoits of yellow fever into the circulating blood (perhaps ultra microscopic).
e. Development of the toxemic symptoms characteristic of the invasion of yellow fever in the inoculated non-immune.

The following facts, in connection with yellow fever, are now very generally admitted:[1]

1. The only natural method that is known by which yellow fever is transmitted from the sick to the healthy person is by the bite of mosquitoes previously infected by biting a sick person in the first three days of an attack of yellow fever.

2. On the fourth day of the disease the blood no longer contains the virus of yellow fever, even when the fever is high.

3. Up to the present time it has not been proven that yellow fever is transmitted by any other species of mosquito except the one known as *Stegomyia fasciata*.

4. The infected mosquito is only dangerous after an interval of twelve days from the time that it has ingested virulent blood.

5. Contact with a patient, personal effects, clothing, excretions, fomites, etc., are incapable of producing yellow fever.

6. One-tenth of a cubic centimeter of virulent serum injected under the skin is sufficient to cause yellow fever.

7. The virus of yellow fever rubbed on the denuded skin does not give the disease.

8. The virus of yellow fever preserves its vitality and virulence in defibrinated blood for a period of five days, when protected from the air, preserved under liquid vaselin, at a temperature of 24 C. to 30 C. At the end of eight days under similar conditions the virus is no longer active.

9. Virulent serum exposed to the air at a temperature of 24 C. to 30 C. is inactive at the end of forty-eight hours.

10. The virulent serum becomes harmless after heating for five minutes at a temperature of 55 C.

11. In the serum of the patient the virus of yellow fever passes through a Berkenfeld or Chamberland filter without dilution, providing the density of the filter is not too great.

12. The blood serum of a yellow fever convalescent presents preventive properties. The immunity produced by such serum is still present at the end of twenty-six days. The serum also appears to possess therapeutic properties.

13. The usual period of incubation of yellow fever is from three to six days.

14. Apart from the natural transmission by means of the bites of infected *Stegomyia fasciata* mosquitoes, the only other proved method by which it has been possible to transmit yellow fever artificially consists in injecting non-immunes subcutaneously with yellow fever blood.

15. Experimental yellow fever has been produced by the bite of an infected *Stegomyia fasciata* mosquito fifty-seven days after it acquired the infection.

16. Yellow fever can only spread in regions where the *Stegomyia fasciata* prevail.

17. It is possible to eliminate yellow fever from the world by three methods: 1. Mosquito proof isolation of all cases, including those suspicious. 2. Thorough fumigation of patients' quarters and those adjoining. 3. Attempt to destroy all mosquitoes in all their stages.

18. Neither in the mosquito nor in the blood or any other tissue has anyone succeeded in discovering the germ of yellow fever.

### EXTERMINATION OF HUMAN MALARIA.

We have reason to believe that human malaria would disappear from the world, if any of the following methods could be put into effect:

1. If the parasites could be eliminated from the blood of all malarial persons by quinin or other method. This is difficult, because we could never get at all infected persons.

2. If all healthy mosquitoes could be prevented from biting infected persons; or if infected mosquitoes could be prevented from biting healthy persons. This method would be practicable if everybody were to adopt preventive measures against the mosquito.

3. If all the anophelina mosquitoes could be destroyed. This is possible if all the people in all localities of all countries begin, and keep up, a vigorous crusade against the mosquito in all its stages.

Unfortunately, not one of these methods is capable of universal application, and while we may or may not be able to entirely eliminate malaria, there is no question of doubt but that we can reduce the number of cases to a minimum.

### EXTERMINATION OF YELLOW FEVER.

From the positive results obtained in Cuba in 1901, under the direction of Col. W. C. Gorgas, of the American Government of Intervention, and still maintained by the Cuban sanitary authorities, we have reason to state positively that yellow fever could be eliminated from the world by the use of measures similar to those used in Cuba, as follows:

1. Destroy as many mosquitoes as possible, so as to limit the number of insects capable of transmitting the disease. We know that if there were no mosquitoes there would be no yellow fever.

2. Prevent mosquitoes from biting yellow fever patients. If we prevent the mosquitoes from getting infected we also prevent yellow fever. This is, perhaps, the most important measure, namely, strict mosquito-proof isolation of all cases of yellow fever and all suspicious cases.

3. Destroy, by thorough fumigation, all mosquitoes that may have become infected by biting yellow fever cases.

### EXTERMINATION OF FILARIASIS.

We know that both culex and anophelina species of mosquitoes act as intermediary hosts of the filaria; the worm going through its cycle of development in the body of the insect. After a period of days the insects

1. These conclusions are based on the experiments and investigations of the following workers: Drs. Charles J. Finlay and Claudio Delgado, in Havana, 1881 to 1900; Dr. A. Agramonte, in Havana, 1899; American Military Commission, composed of Major W. Reed, M.D., and Drs. J. Carroll, A. Agramonte and J. W. Lazear, in Havana, 1900 and 1901; Dr. J. Guiteras, in Havana, 1901; Commission Working Party No. 1 of the Yellow Fever Institute, Public Health and Marine-Hospital Service, composed of Drs. H. B. Parker, G. E. Beyer and O. L. Pothier, in Vera Cruz, 1902; Dr. A. Agramonte, in Vera Cruz and Mexico City, 1902; French Commission, composed of Drs. Marchoux, Salimbeni and Simond, in Rio Janeiro, 1902 and 1903; Brazilian Commission, appointed by Dr. Emilio Ribas, composed of Drs. L. P. Bareto, A. Gomez de Silva and Julio de Barros, in Sao Paulo, 1903.

are capable of transmitting the infection to human beings. We can only expect to exterminate, or at least diminish the disease, by similar methods as against yellow fever:

1. Compulsory mosquito-proof isolation.
2. Thorough fumigation of patients' quarters, etc.
3. Destruction of all mosquitoes in all their stages.

### QUARANTINE.

We should endeavor by all means possible to prevent importation of all persons having transmissible diseases. Quarantine, if strict, will exclude yellow fever and diminish malaria in any country. However, should yellow fever gain entrance to a place, it is easy to control and exterminate by the methods above mentioned.

All persons on steamers, coming from countries where yellow fever is prevalent, should not be allowed to land until a period of five days has elapsed, counting from the time that the steamer set sail from the infected port, and providing no suspicious case has occurred during the trip. If there has been a suspicious case of sickness on board, quarantine should be enforced for at least five days after arrival of steamer. (Persons who present a satisfactory certificate of immunity, may be allowed exemption from quarantine.) The temperature of all persons in quarantine should be taken morning, noon and night, and any one having the least rise of temperature should be at once placed in a mosquito-proof isolation hospital for further observation.

Even if no sickness has occurred on the steamer, quarantine should be enforced for at least one day after arrival of a steamer from a malarial infected country. Temperature of all persons should be taken, and any one having a rise of temperature, sufficient to arouse suspicion, should have his blood examined and, if found to contain malarial parasites, he should be detained in a mosquito-proof hospital, and put under medical treatment until the parasites are known to have disappeared from the peripheral blood, before he is allowed to land.

### INFECTED PERSONS.

When persons are found to have malaria or yellow fever, they should be compelled to undergo isolation in mosquito-proof rooms. The bed should also be covered with mosquito gauze so as to afford double protection. In the case of malaria, the patients need only be protected, as a rule, between sunset and sunrise, the time that the anophelina usually bite. In yellow fever, the patients should be protected against mosquitoes day and night, during the early stages of the disease. All persons suspected of having yellow fever must be reported to the board of health, who will immediately arrange to have the patient conveyed in a mosquito-proof ambulance to a specially constructed mosquito-proof hospital. The patient should be covered while being carried to the ward, so as to prevent any possibility of being bitten by mosquitoes. When the patient is inside the special hospital, all danger of spread of the disease is eliminated.

After removal of the suspected patient from his quarters, all the rooms in the building, and in the adjoining houses, must be immediately fumigated, so as to kill any mosquitoes that may have bitten the patient. All persons employed to fumigate rooms should be immune to yellow fever.

### METHOD OF KILLING INFECTED OR NON-INFECTED MOSQUITOES.

All rooms or buildings must be tightly sealed before commencing fumigation. This work should be done with care so as not to disturb the mosquitoes in the rooms, to the effect that they might escape. Men employed in fumigating work can secure temporary protection against the bites of infected mosquitoes, by rubbing exposed surfaces of skin with oil of citronella, pennyroyal, or 5 per cent. menthol ointment.

*Sulphur.*—This is the quickest and most effective agent to kill mosquitoes in rooms, destroying even hibernating forms; but its use is objectionable because it tarnishes metals and bleaches fabrics. From one to four pounds of sulphur to one thousand cubic feet of space should be burnt. A small amount of alcohol is added to the sulphur, and, after igniting, everything should be closed tight for a period of from one and one-half to four hours. Pans of water should be placed in the room.

*Datura Stramonium.*—The powdered leaves and stems of the Jimson weed mixed with saltpeter and burnt, kills hibernating mosquitoes. The proportion used is one ounce of the mixture to each two hundred cubic feet of space. It is the only cheap, safe and effective material for the purpose and was worked out by Mr. George Keller of Newark, N. J., for the New Jersey Mosquito Commission.

*Pyrethrum Powder.*—Use from one to six pounds for each one thousand cubic feet of space, and expose from three to six hours. This has been found useful, but does not certainly kill mosquitoes, but stupifies them so that they drop to the floor. When the rooms are opened up, the insects must be swept up and burned at once. It is said to be ineffective against hibernating forms.

*Formaldehyde Gas.*—This is effective against active summer mosquitoes if rooms are kept closed and tightly sealed for two or three hours. Generally use one liter of formalin to one thousand cubic feet of space. It is said to be ineffective against hibernating forms.

### TO DESTROY MOSQUITOES IN THEIR EARLY STAGES.

It is while the insects are in the aquatic form that successful extermination can be made, and especially while they are in the larval stage. On account of the difference in the breeding places of the yellow fever and malarial bearing mosquitoes it is best to consider them separately.

### YELLOW FEVER MOSQUITO.

This insect prefers to breed in water, in rain-water barrels, cisterns, tubs, cans, bottles or any receptacle containing water. This does not necessarily have to be rain-water.

City or state laws should be in force during the breeding season making it a penalty for any one to be found harboring larvæ, commonly called wrigglers or wiggle tails, around their premises. No water should be allowed to stand in any receptacle, unless it is covered, so that no mosquitoes can enter. The sanitary inspectors should receive special instructions to see that the laws are complied with. They should be provided with petroleum distributing cans, to pour oil on all uncovered, still or slowly moving water that they may find. Generally use about two teaspoonsful to the barrel, or one ounce to each fifteen square feet of water. Rain-water barrels and cisterns should be abolished by furnishing a cheap water supply. However, in localities where receptacles for water are absolutely necessary, make it compulsory that they be mosquito-proof. A strong, tight-fitting lid can be made, having a small space in the center about six inches square. This space is to be covered with fine wire gauze to prevent mosqui-

toes from entering, and still allow enough ventilation for the water. Surface drainage should be abolished wherever possible. Ditches and open drains should be cleaned occasionally and thoroughly flushed. Pools or ponds that cannot be drained should be filled in with sand or other material, or stocked with fish, or treated once a week with petroleum.

ANOPHELINA OR MALARIAL BEARING MOSQUITO.

This insect breeds in water in puddles, in hollows made by the hoofs of cattle, in pools, ditches, sluggish streams and especially in swamps. In order to prevent such accumulations of water, make superficial drains through swamp lands, or eliminate the water by filling in with sand or earth. Remove the grass and weeds from the edges of pools, streams and ditches. See that irrigation is conducted under restrictions. Pour oil over surface of water where it is practical; this forms a thin film over the surface which kills the larvæ and pupæ by preventing them from breathing. Renew the application once a week. It is doubtful whether the use of oil is successful in the treatment of swamp lands, and it is better to have these filled in or drained.

LARVICIDES.

The New Jersey Mosquito Commission have experimented with various larvicides, with the following results:

*Crude Petroleum.*—This may be used to kill larvæ as well as adults that attempt to lay eggs. It is useful on salt and fresh water but does not spread rapidly.

*Kerosene.*—This has the same effect as crude petroleum, but spreads better.

*Fuel Oil.*—This is like kerosene, but cheaper, somewhat heavier, and more lasting. It spreads equally well on salt or fresh water. It is the most effective mineral oil.

*Chloronaptholeum.*—This is a creosol preparation, mixes readily with fresh water and kills mosquito larvæ in proportions of 1 to 1,000. Good for gutters and lot pools. Useless in salt water.

*Phinotas Oil.*—This is a creosol combination. It is the most effective larvicide known. Kills everything from larvæ to fish. Especially useful in sewer basins, gutters, cesspools, etc. Does not work with salt water.

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# THE ELEMENTS OF DIAGNOSIS OF CUTANEOUS SYPHILIS.*

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CHICAGO.

The difficulties in the diagnosis of syphilis have been admitted by the most skillful diagnosticians. The reason for this is that the cutaneous manifestations of syphilis may be imitated by quite a number of other less obnoxious skin diseases and that syphilis may often appear in forms which simulate the lesions of other dermatoses. As Dr. White says, the skin, by its comparatively simple structure, is incapable of displaying a large variety of pathologic manifestations, and the limited number of skin lesions are therefore reappearing in a large number of morbid conditions.

No less an authority than Kaposi says:

The syphilids do not offer any other morphologic properties than the non-syphilitic dermatoses, as they all appear in macules, papules, pustules with secondary formation of scales and crusts. Their unquestioned specific clinical features, by which they can be distinguished from all other non-syphilitic dermatoses, and which impress us as peculiar typical syphilitic symptoms, are therefore not based on their morphologic properties, neither do they depend, as it is often taught, on certain physical properties, as the sepia (copper) brown color, their predominant localization on the flexor surfaces and around the orifices of the body, their symmetrical distribution, circinate appearance, formation of groups, their polymorphism, excessive formation of crusts and scales and absence of itching. For all these external features are encountered also in the non-syphilitic eruptions.

The specific properties of the syphilids are said to be the sum total of the phenomena which compose the pathologic-anatomic course of the individual lesion of which we distinguish three cardinal anatomic features:

1. The products of cutaneous syphilis are all equally composed of a uniform cellular infiltration of the papillary body and the corium and vary only in size.

2. The cells do not show a tendency to form a lasting organization into connective tissue, but undergo retrogression and complete involution.

3. The growth and consummation of the infiltrate follow in certain order and direction. They spread and disappear centrifugally.

But the peculiar specific clinical characteristics of the lesions of syphilis, if determined by these pathologic-anatomic features, are not pathognomonic of syphilis exclusively; they are the clinical expression of cellular infiltration of the papillary body in general and are everywhere met where there is such infiltration.

1. The dense sharply defined cellular infiltration of the corium and papillary layer which is manifested clinically by a papular elevation is not the exclusive feature of secondary syphilis. It is encountered in a large number of other skin diseases, such as chronic eczema, psoriasis, lichen planus, herpes tonsurans, pityriasis rubra, lupus erythematosus, etc.

2. They all show the essential feature that they do not form lasting organizations. They are distinguished by these very same features, which permit a *restitutio ad integrum* from the granulomata, in which proliferating cells undergo further development and formation of new tissue (tuberculosis, leprosy, syphilitic gummata, etc.).

3. The centrifugal spread of the infiltrate is not the expression of the pathologic process, but is determined by the anatomic structure of the skin. It is not the morphologic expression of a specific disease, but is encountered in all morbid processes in the vascular cutis, as, for instance, the different forms of erythemata, psoriasis, scleroderma, pityriasis rubras, etc. All diseases, the pathologic processes of which are confined to the papillary layer or around the blood vessels, are marked by a circular spread, due to the fact that the blood vessels perforate the tissue in all directions which permit a free, that is, a circular spread of the pathologic process.

If these three cardinal symptoms are not characteristic for the pathologic process of syphilis, neither can the clinical phenomena derived from them be regarded as peculiar to the syphilitic infiltrate only. In fact, all the characteristic symptoms which have been ascribed to the papules of syphilis can be applied as well to the papules of lichen planus.

If we analyze the characteristic clinical features of the syphilids, we see that none of them is conditioned by the specific process, and that they all have their

* Read before the Chicago Medical Society.

origin in external circumstances which may vary in individual cases.

The general characteristics of the syphilids which we are taught render their recognition more certain are color, resistancy, surface, localization, central depression and scaling, polymorphism and the chronological sequence and course of eruptions.

### COLOR.

The color is not due simply to local hyperemia since it does not disappear on pressure. It is undoubtedly a deposit of some coloring matter in the tissues; but what this substance is and how it is deposited there, is still a matter of discussion. Kaposi says that the specific diathesis may have some part in the production of discoloration. Cornil says that the color is due to extravasation of red blood corpuscles. Neuman intimates that the discoloration is due to pigmented round cells. Kreibich tried to reproduce this color artificially and has found that the color is composed of equal parts of red and brown with the addition to this composition of a trace of black which gives to the resulting color a sombre hue (color tristis). Red is the color of inflammation produced by arterial congestion. The more the blood vessels are dilated and filled (in the beginning of the inflammation) the more will the red predominate. In this state, that is in recent eruptions, we see the roseola syphilitica resembling the roseola vulgaris; brown is the color of the cellular infiltrate coming from the deeper parts; black is the color of blood pigment. It is easy to comprehend that the resulting color can not be constant because its components are subject to variation in the different stages of the disease, or under different circumstances. The red is predominant in recent eruptions, as also in all lesions which contain a permanent cause of irritation, as for instance in the pustular syphilids; or in cases in which the infiltrate is less marked, as in the small papular syphilids. In anemic persons, in whom the hyperemia is less marked, we find the color more brown; on the lower extremity, the lesions are colored bluish-red, due to venous stagnation. These conditions being variable, we cannot assign to the color any absolute value as an element of diagnosis.

### RESISTANCY.

This, also, is not a constant symptom. It changes with the degree of infiltration diffused between the meshes of the connective tissue. The flat papule with less infiltration feels less hard to the touch than the thick, round papule.

### SURFACE.

This is mostly smooth and shiny, due to stretching of the epidermis, and is naturally not an exclusive character of the syphilids but is met in every cellular infiltration of the cutis which is covered by an unaltered epidermis, as for instance, in lichen planus.

### LOCALIZATION AND DISTRIBUTION.

The earlier syphilids are symmetrical and with lesions profusely distributed, but this symptom is found also in other disease in which the pathologic process is localized around the blood vessels and, perhaps, carried by them, as in leprosy, mycosis fungoides and other granulomata. It is true that the eruption has certain prevailing localities, as the proximal portions of the extremities, the chest, forehead and some parts of the face (especially in seborrhoics). This peculiarity, however, is conditioned, not by the specific process, but by external circumstances which produce for the process a *locus minoris resistentiæ*; 1, on places where the skin is more pressed to the bones and therefore more stretched, and 2, on places which, by their mobility, are more exposed to injuries of a mechanical, physical or chemical nature, as the mucous patches on the tonsils—due to the irritation by the act of swallowing, or the condylomata around the anal orifice—due to irritation by excretions.

### POLYMORPHISM.

The multiformity of lesions and their co-existence in the various stages of development is often of value in the diagnosis of syphilis. Polymorphism, however, is not constantly present, and besides we may see it in non-syphilitic dermatoses. The difficult cases are just the ones in which there are only a few perhaps uniform efflorescences and in which it is necessary to determine whether or not it is syphilis.

This arbitrary value of the diagnostic elements of syphilis may be the reason why the importance of two other elements is usually emphasized in determining the diagnosis. These are: (1) The ensemble, or the general impression of the whole complex of existing symptoms; (2) the chronological order in the development of the individual symptoms and the intervals between their appearance.

These two conditions, the ensemble of suspicious symptoms of which each by itself may not suffice for a correct diagnosis, and the chronological order of their appearance in intervals corresponding with the classical periods of syphilis, have always been regarded as of the greatest significance and as the most reliable elements of diagnosis in cases of doubtful cutaneous eruptions. By force of habit and power of logic, we are ready to accept the presence of striking symptoms as unmistakable proof of the existence of a disease in which alone these symptoms prevail, and do not hesitate to make a diagnosis of syphilis in cases in which, after an exposure to possible venereal infection, a primary lesion on the genitals is followed by swelling of the inguinal glands and where, in due time after, a cutaneous eruption appears which may be interpreted as some one of the secondary lesions of syphilis.

The object of this paper is to illustrate the possibility of coincidental existence of these conditions in non-specific cutaneous diseases by cases which have come under my observation, and in which the different manifestations appeared in intervals corresponding to the classic periods of syphilitic incubation.

CASE 1.—A young man, aged 25, was referred to me by Dr. P. Sisman, with the following note:

"Patient has a sore on the ventral aspect of his penis and enlarged, painful inguinal glands on the right side. The history is as follows: He had sexual intercourse on October 28. About a week or ten days later, he began to feel an itching of the penis, and soon after several small vesicles appeared on its dorsal surface. About November 9, he noticed a pustule on the ventral aspect of the penis which has since enlarged and developed into the present sore. About the first of this month (December) he began to feel pain in the groin, the glands soon became swollen, about the tenth of this month an eruption appeared on abdomen, navel, axillæ, chest, and in the lumbar region. The itching has continued during that time. I have advised the patient to try to bring the woman in the case for the purpose of confrontation, but he did not succeed in doing so."

*Examination.*—On the ventral side of the penis there was a "pustulo-crustaceous" sore about one-half inch in diameter, which, on removal of crusts, showed deep edges and a red granulating somewhat indurated base. On the prepuce, and near the root of the penis, there were several large papules. Around the umbilicus there were a few larger elevations cov-

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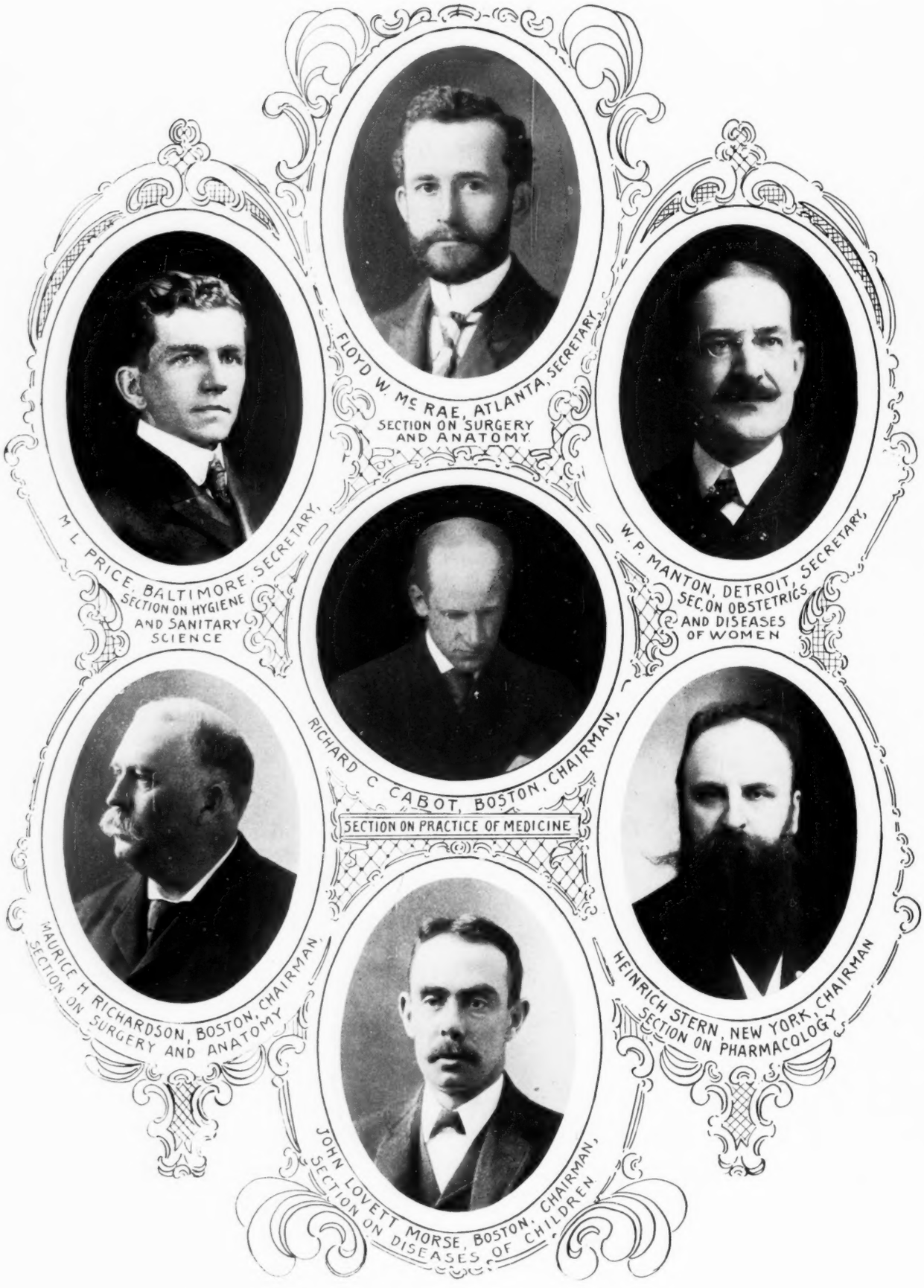
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ered with characteristic scabies crusts, and there were similar lesions on the abdomen and near the axillæ. On the trunk and extremities there were red exudative papules. The inguinal glands were enlarged, somewhat indurated, and sensitive.

The diagnosis of scabies is here apparent, but the history of the case, the induration of what could be regarded as the primary sclerosis and the chronological order in appearance of the adenopathy and the cutaneous eruption, justified the physician in thinking of the possibility of syphilis, either pure, for syphilitic eruptions especially of the genitals may sometimes be accompanied by itching, or of syphilis in combination with scabies. Such combinations have been reported to alter considerably the usual symptoms of both.[1]

I could exclude syphilis in this case for the reason that the elementary lesion of syphilis was absent; the papules were all exudative and not infiltrating, while the element of scabies was present. This element, as I have observed, is the characteristic crust formed over the patches of scabies. The patches, being exudative, prevent a perfect drying up of the crust and the crusts of scabies are, therefore, always mixed with products of acute exudation. They are made up of dried material interspersed with glistening droplets of exuded serum.

CASE 2.—A druggist, aged 22, contracted a gonorrhea, complicated, according to his diagnosis, with a soft ulcer of the glans, some eight weeks previously. He treated himself with injections and by cauterization of the sore. Three weeks later, there was a painful swelling of the inguinal glands, which were reduced in size and sensitiveness by pressure bandages applied by a physician. This was followed by the appearance of red scaly papules over chest and thighs.

*Examination.*—Chronic posterior gonorrhea. On the glans there was a slight infiltration of brownish red color on place of previous sore. The inguinal glands were moderately enlarged. On the chest, buttocks and thighs there were disseminated solitary papules varying from a pea to a dime in size, dry, covered with thin, muddy, gray scales accumulated over the center of papules leaving the periphery smooth. The eruption was not accompanied by itching.

The difficulties which may confront the diagnostician in differentiating the lenticular papular syphilid from an atypical form of psoriasis (seborrhoic dermatitis) are well known. The authorities lay stress on the difference in the scales of these two lesions. The scales of syphilis are smaller, thicker, less abundant, of a dirty gray color and often do not entirely cover the lesion. The scales in psoriasis are larger and more lustrous, of a silvery or whitish appearance, distinctly imbricated and more freely produced and shed.[2] Other text-books state that the scales of syphilis are developed over the center of the lesion and rarely extend to the periphery.[3]

I have tried to study the scale formation on the papules of syphilis in quite a large number of cases which I had the opportunity to observe in the last few years. Scales are not present in all papules, and the very recent ones do not show any scaling. Later, scales begin to accumulate at the center, but may also cover the whole surface and when they become loose adhere only to the periphery. From my observations I am inclined to believe that the adhesion of the scales to the periphery constitutes a peculiarity of syphilis.

In trying to remove the syphilitic scale by scratching or even slight friction, the center may be entirely denuded while at the periphery a ring of scales remain with the detached side towards the center. I believe this phenomenon can be explained by the difference in the formation of both. The scaling in syphilis is produced by the mechanical detachment of the corneous layer due to the cellular infiltration of the cutis, while the scaling in psoriasis is due to epithelial proliferation and excessive cornification of the epidermis; both of these processes are more pronounced in the center. For this reason, the scales of psoriasis are here accumulated more and more closely attached, while in syphilis, on the contrary, they are more easily detached in the center on account of the greater mechanical pressure from beneath. This difference in the scales enabled me to make a diagnosis of psoriasis in this case. A few *x*-ray exposures brought about the disappearance of the eruption.

CASE 3.—I saw this patient through the courtesy of Dr. N. Remmen.

*History.*—The patient, a widower, aged 47, noticed a sore on the prepuce some seven weeks previously. Two weeks later, the inguinal glands became noticeably enlarged. Two weeks ago, that is, five weeks after the appearance of the sore, and three weeks after the adenopathy, an eruption appeared on his body.

*Examination.*—The patient is a robust, stout man; there was no trace of the primary sore. The inguinal glands were somewhat indurated, though not much enlarged, with some tenderness on pressure. The lesions were dark brown, somewhat elevated, slightly scaling, and in size from pinhead to pea. Parts affected: face, over eyebrows and bearded region; back of left hand and elbow, right arm, elbow, and under arm. There were scattered lesions of larger size (about a dime) over the shoulders, buttocks and thighs. Between the shoulders there was a characteristic irregularly outlined area, size 3x1-3 inch, of eczema seborrhoicum. There were scattered papules also on the chest and abdomen. On the glans penis, there were a few papules, and on the prepuce near the sulcus there was a ring of shiny papular elevations. The color was somewhat lighter on the larger lesions than on the small papules, and capillary bleeding could be provoked in some. The patient never had psoriasis before nor had any one in his family.

*Treatment.*—A reducing ointment (acid pyrogall. comp.) caused the disappearance of the eruptions in two weeks.

CASE 4.—I saw this patient in consultation with Dr. I. M. Lang.

*History.*—The patient, aged 38, had acquired an ulcer of the glans eight weeks previously. Slight induration of the base made the differential diagnosis uncertain. On application of an antiseptic dusting powder, the ulcer healed in two weeks. Six weeks later, a maculo-papular eruption which soon became intermingled with pustular lesions appeared, first on arms and backs of hands, and then on trunk and face. The great resemblance of the lesion to syphilodermata induced the physician to invite consultation.

*Examination.*—On the face there were large macular lesions of bluish red color, varying in size from 1/4 to 1/3 inch in diameter, and resembling very much a roseola syphilitica. On the chest, in addition to macules of the same character, there were papules, mostly oval in form, dark red in color, size of split pea and larger, some depressed in center, and the surface smooth, without scales. On the back there were maculo-papular lesions of the same character; in the interscapular region there were longitudinal patches of pointed small papules with vesiculo-pustule in center, resembling acne syphilica, some of them covered with dry crusts. The arms and especially the backs of the hands were covered with oval, dusky red papules. The lower extremities and genital regions (scrotum) showed the same papular lesions. There was no adenopathy, neither were there mucous patches in the oral cavity. The lesions did not itch.

The negative features of the disease rather than the positive, the absence of the lesions on the flexor surface of arms and palms and the absence of a typical

1. Sibut. Jour. des Malad. Cut. et. Syph., 1898.
2. Prince A. Morrow's System.
3. Kaposi, Shoemaker.

syphilitic papule, induced me to diagnose the case as erythema multiforme.

The similarity of erythema multiforme to syphilis may be still more striking, as is illustrated by the following case:

CASE 5.—A florist, aged 24 entered the county hospital on January 6, 1904, with the following history:

*History.*—Two months previously, a sore the size of thumb nail appeared on the side of the prepuce, coming on 10 days after exposure to venereal infection. He was told by a physician that it was syphilitic and began taking mercury. Four days later, an enlargement of the inguinal glands appeared, followed by the appearance of red spots on the back of the neck. These subsequently spread rapidly over the body. He became hoarse, his mouth became sore, and the red spots over his body began to blister.

*Examination.*—The patient is a medium-sized, well-developed man. The skin almost all over the body was covered with a macular and papular eruption occupying large surfaces of face, neck, trunk and extremities. The upper part of the body was affected more than the lower. On the face, there were papules varying in size from a pea to a dime, brownish red, not much elevated and more macular than papular. On the external corners of the eye the papules were umbilicated and covered with light crusts. The neck presented large patches 1x1½ inches, each having darker color in center with detachment of epidermis above the spots. The chest showed still larger lesions, size from half-dollar to a dollar, running together in large patches presenting a variety of colors, the center was dark and livid, and covered with either a small vesicle or a thin crust. Around them there was a zone of vermilion color surrounded by a slight pink which gradually ran into healthy skin; each patch was raised about 1/16 inch above the healthy skin. The arms were affected more on the extensor surfaces, having similar lesions to those just described. The papules were smaller on the back of the hand; on the palms, the macules were the size of a pea, brownish in color and glistening from beneath the epidermis; the fingers were diffusely livid red. Here and there were a few vesicles. On the legs there were only a few disseminated papules, but the feet, especially the soles, were diffusely red and swollen, making it impossible for the patient to walk. The scrotum and penis were red and macerated. The penis showed much purulent secretion. The ears were livid and diffusely swollen. The lips were dry, and presented some ulcerations and fissures on the corners. In the oral cavity there were congestion and edema of the mucous membrane, plaques on the tonsils, and foul breath. There was generalized adenopathy.

In this case, in spite of the striking history, the existence of many symptoms of syphilis, the stomatitis, adenopathy, etc., I excluded syphilis because the typical element of secondary syphilis was absent and made a diagnosis of erythema multiforme because the symptoms of this disease, the main element of which is an erythema of the skin combined with an exudative process in the cutis, were marked.

The papule of erythema being exudative, disappears on pressure while the cellular infiltration of the syphilitic papule can not be pressed away. The color of erythema is red, shading to vermilion, with a livid spot in the center, while the papules in syphilis are dark, livid brown, with an atrophic white umbilication in the center. The surface of the papule in erythema is smooth, in syphilis scaly, and its size much smaller, more circular and circumscribed. Erythema multiforme may complicate syphilis, or may be the direct result of the syphilitic poison circulating in the vascular system, or of the mercurial treatment. Cases of this kind have been observed by a number of writers (Finger, Neuman, Danielson and others), and they have all come to the conclusion that there must be some connection between the two diseases, that syphilis may facilitate the appearance of erythema multiforme. This causal relation may have existed in Case 6. The patient may have been a syphilitic or the erythema may have been produced by the mercury which he had been taking for two months. The salient point was to ascertain whether the visible symptoms were those of syphilis, which was important for the treatment to be employed, and for the reasons mentioned I could answer this question in the negative. Salicylates internally and astringent applications externally reduced the manifestations of the disease in a very short time. When the patient left the hospital after two weeks, the red areas had almost completely faded, leaving only slightly pigmented spots. The swelling of the soles of the feet had disappeared and the patient could walk without pain; the lips were normal and the fissures had healed. Cases of this kind are not rare. Lau[4] reported a case of relapsing erythema multiforme, which was mistaken for syphilis and the patient repeatedly treated with mercury in different institutions and bathing resorts, so that he consumed in all about 4 pounds of blue ointment.

### CONCLUSIONS.

Summarizing these observations, I would formulate my conclusions as follows:

1. The elements of diagnosis in cutaneous syphilis have only an arbitrary value.

2. The element of time is an unreliable factor in the diagnosis of syphilis. It may happen that simple sores with consequent swelling of the glands will develop in intervals corresponding to the periods of syphilis.

3. The regionary lymphadenitis is not absolutely pathognomonic for syphilis. We may see adenitis of inguinal and cubital glands following infection of simple wounds which have the characteristics of syphilis, viz., they are indolent and indurated.

4. The ensemble of all syphilitic symptoms, in exceptional cases, may be closely imitated by non-specific dermatoses. The diagnosis of syphilis can be made with absolute certainty only when based on positive as well as on negative findings, that is when we not only find the characteristic elements of syphilis, but when we can with certainty exclude all other skin diseases which may appear under the similar symptoms.

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## THE PRACTICAL SIGNIFICANCE OF CERTAIN COMMON SYMPTOMS IN THE UPPER ABDOMEN.

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The upper and right hand corner of the abdomen is a field of present-day investigation which promises valuable returns for all efforts made to clear up its symptomatology. It has fallen to the lot of a new candidate for honors in the field of human diagnostic investigation to aid in this beneficent work, viz., the skilled operating surgeon. Surgery to-day, in the hands of the competent surgeon, bids fair to state definitely the reasons for the existence of the symptoms in the upper belly, long recognized by the internist. But neither the internist nor the pathologist, dealing, as they must, with things unseen within the abdomen of the living have even been in a position to point out their true pathology. This surgical investigator of living human pathology, it is hoped, will succeed in doing for us in

4. Dermal. Centralb., No. 3, 1900.

this region what he has been able to do in the lower belly and pelvis. The patients suffering from pathology in the liver and the gall bladder, the right half of the stomach, and the first portion of the duodenum are legion. True, there are other very important originators of pathology in the upper belly, viz., the pancreas and the right kidney; but my subject precludes more than the naming of these organs, because the task that I have set as the subject for this paper is "The Practical Significance of Certain Common Symptoms in the Upper Abdomen."

Of these, the first in importance is pain. Pain in the abdomen seldom indicates by its expressed location the point from which it originates. This fact has led some one to remark that the sympathetic nerve has no sense; meaning thereby that the point of pain indicated by the patient may have no reference to the pathologic entity which originates it. Ask the patient to indicate the point of greatest suffering, and in the majority the hand will move in an aimless way over the whole abdominal region. This is true regardless of the grade of severity, except possibly where the peritoneal involvement is slight. When the pain is severe, general muscular rigidity over the abdomen is the rule. When the lesion is only great enough to give a moderate degree of distress, the muscular rigidity is frequently limited to the region above the lesion. This point also is seldom accurately located by the patient. In the average chronic case not having an acute exacerbation, lesions about the gall bladder are less sensitive than those of the stomach. Lesions involving the pyloric third of the stomach and gall bladder can not well be differentiated by external manipulative methods alone. Although pressure applied over the lower costal arch on the right side, as pointed out by Eliot,[1] has been found very helpful in about two-thirds of the cases in which the symptoms pointed to inflammation in the region under discussion.

Eliot has shown that costal resistance is likely to be just as marked as is that of the muscles lower down, when covering an inflammatory process. This is especially true in abscess of the gall bladder and cholecystitis. This diagnostic aid has been found useful in my examinations of this class of cases for many years, as it has undoubtedly to others, both physicians and surgeons; but it remained for Eliot to point out and extend its use. I have found it especially helpful in the pain of the upper abdomen, in which appendicitis was one of the problems in the diagnosis. Pressure over the right lower costal arch, which does not elicit pain, will almost certainly exclude acute gall bladder trouble. It is also interesting to note the difference in costal resistance on the two sides, when the right upper belly is involved in an inflammatory process.

Light finger percussion, which elicits pain, is another valuable method of localizing active inflammatory foci in patients who are not over obese. An ulcer in the stomach or duodenum can often be located in this way, and, when combined with the subjective symptoms present in the case, valuable information is obtained. It might be said, in passing, what has probably been said a great many times, or, if not said certainly has always been understood by diagnosticians, that a good diagnostician is self-made, and that a not small part of his skill is so subtle as to defy language to express it. The most that can be said is that diagnosis is the use in this day of the facts worked out by many observers, both clinical and laboratory, combined with the results obtained in the examination of many patients of one class. A combination of all these necessary and obtainable conditions will develop in the individual observer an educated instinct for diagnosis, which is invaluable.

Another source of pain is the distention caused by gas. Gas does not accumulate until the inflammatory condition, or its results, are great enough, as pointed out by Graham, to inhibit peristalsis. In this way can be explained one of the causes of the common symptom of distention in the upper belly, which makes the demand for the various antidyspeptic remedies. The more serious the localized inflammation the less peristalsis; the less peristalsis the greater the distention and pain which results from it. If this localized condition go far enough to perforate and the patient recover, it is at the expense of the adhesions which maintain the local lessened peristalsis; and an acute case is converted into a chronic one.

So far I have referred only to the pain which may result from lesions in the stomach or the duodenum. But the same general symptoms may develop also from inflammatory conditions in the gall bladder, with or without gallstones. It is interesting to note the frequency with which the introduction of food or drink into this corner of the abdomen gives rise to pain, or at least an expression of distress, when any one of the organs in this corner is the subject of disease. Nature tries to keep the parts at rest by refusing to retain in the stomach either food, drink or medicines, and we have been very slow to comprehend the purpose of Nature in this particular.

Another source of pain in the upper abdomen is the contact of the gastric juice with an ulcer in either the stomach or duodenum. This pain is an interesting and characteristic symptom. It is not many years ago that some of us were calling the cases which came complaining of distress in the stomach when it was empty, neuralgia. We learned from our patients that the greatest relief from the pain was obtained by keeping small quantities of food in the stomach. There is probably such a disease entity as gastralgia, which is functional in origin; but we all now believe that in the vast majority of cases it is a symptom, where inflammatory change is the definite and underlying cause. An ulcer of the stomach or the duodenum, in contact with the acid gastric juice, will undoubtedly account for many of the symptoms of pain in the region of the abdomen under discussion. To quote from Graham, who also discusses contact of food on the ulcer, as follows:

> **Pain is due almost wholly to the irritant actions of the acids on the open ulcer, with the added element of spasm. The greater the quantity of liquid in the stomach and the higher the degree of acidity the more severe the pain. In other words, intensity of pain and degree of acidity run about parallel. The irritant action of the food as a cause of pain, by passage over the diseased area, can not enter into the question; because anything that diverts, dilutes, neutralizes or removes the acid liquid lessens or entirely relieves pain. Antacids, as a rule, quiet for a time and remove nothing; vomiting or irrigation of the stomach relieves by removing the offending acid; but no rough particles of food which could irritate are found.**

Most of those who have written on this subject agree as to the frequency of the pain and formation of gas complained of by patients suffering from lesions in the stomach, duodenum and gall bladder. The next most frequent symptom mentioned is vomiting. Among

1. Medical Record, Feb. 6, 1904.

my own cases, however, nausea is more frequently spoken of than vomiting. Its relation to the injection of food, like that of pain, varies. Pain precedes it in the majority of cases, and it is the suffering from this that undoubtdly brings it on. If the ulcer is in the stomach and is so located as to be brought early into contact with the acid gastric juice, then the nausea or vomiting will be spoken of as occurring within an hour or two of taking food; sometimes the patient will tell us that the pain comes on at once. This is frequently due to gall-bladder inflammation, and is especially common if there are adhesions about the gall bladder. If the ulcer is duodenal, then four or even six hours may go before the nausea may develop. If the nausea comes on early and is followed by vomiting, the rejected food will be but partially, if at all, digested.

An important determining factor here is the size of the stomach. If this is greatly dilated and, therefore, unable to pass its contents into the small intestine, the patient may suffer for hours; and then by vomiting or by the stomach tube be relieved of a foul, sour-smelling mass of undigested food containing quantities of mucus. Food coming from the stomach in such a state will exclude its ever having reached the small gut. This should be borne in mind; because, although the undigested mass may be removed four or even six hours after being taken into the stomach, it is evident that the latter organ is physically incapable of putting it into the duodenum. If it had, it would be a pultaceous mass showing digestion; so that the degree of digestion is a clue as to its ever having reached the small bowel.

Another interesting fact that perhaps may not properly be spoken of as a symptom, is that these patients in the first months or years of their suffering from disease located in these organs, seldom complain of loss of weight. Note, please, that I say in the first months or years. In the beginning the majority of them are able to maintain their bodily weight and frequently even to gain; but finally either the impaired nutrition long continued, or the infections which result from the solution of continuity in organs and tissues so richly supplied with lymphatics tells on the bodily weight, and they begin to fail. Recently I had a patient (cholecystitis) who had lost thirty pounds in three months, and who was still losing when he entered the hospital for operation. When this time comes in the history of one of these chronic sufferers, he always brings with him the suspicion of the probable beginning of a cancerous process, with all that awful word stands for.

Bleeding from ulcer of the stomach or duodenum has not, in my experience, been a prominent symptom except in the cases that have had a long history and are far advanced. Frequently they will tell you that years before they had a sudden and severe hemorrhage, but none since; and that practically they had not seen a well day since it occurred. But this failure, on the part of the patient, to note the occurrence of hemorrhage does not necessarily imply that it has not been present. Where laboratory methods are made a part of the investigation of this class, it has been found that a large percentage have blood in the stools; if in considerable amount, blood passing in this way may give the stools a meconium-like look, which is spoken of in the textbooks as tarry in character. Macroscopically, this same kind of stool can be produced by the infected bile which may be thrown into the bowel from a gall bladder, the subject of cholecystitis. In this latter class of cases the hematin crystals, which are present in the former character of stool containing blood, will not be found, because of the origin of the color-giving substance in the gall bladder. It is interesting to note that the pain and distress which may accompany these cases of cholecystitis will usually lead to a symptomatic diagnosis of ulcer of the duodenum or the stomach. But the internist or surgeon who has seen many cases of ulcer of the stomach and duodenum will not find it necessary, in the great majority, to examine the stools for hematin crystals. Indeed, a careful history well taken will, in the majority, determine the diagnosis so that there need be no question as to the treatment which should be instituted.

These cases usually have periods in which there is an acute or subacute exacerbation of the trouble. At these times there is usually a moderate degree of elevation of the temperature from 100° F. to 101½° F. It rarely rises above this. The temperature curve not infrequently causes one to think of a possible tubercular element in explanation of its persistence. It reaches its maximum in the early afternoon, and gradually disappears toward evening. It differs, however, in that the 6 a. m. temperature is rarely found subnormal, except in the later stages of the condition, when general systemic exhaustion is pronounced. When this time comes, a subnormal temperature is the rule during the entire twenty-four hours. In addition to the temperature, at this time there is a moderate increase in all of the symptoms which have characterized the previous condition of the patient. There is a little more mental and physical depression; a little more localized distress in the upper right quadrant of the abdomen, especially after taking food, and in consequence of which there is a more pronounced fear of calling on the functions of the stomach, and with it the gall bladder. The patient is willing to drop his usual occupation, and, like a sick animal, seeks a warm and quiet place until the toxemia, which undoubtedly is at the bottom of his symptoms, is thrown off by whatever immunizing resistance he may possess. This is what I am pleased to call the gastric crisis of ulcer or cholecystitis. If resistance is good, the patient may recover his usual degree of health and drift along for weeks, months or years, until another paroxysm of the same kind and due to the same causes renders him inactive for about the same period as the previous attack. These cases are rarely diagnosed correctly, "biliousness" and "dyspepsia" being the words most frequently used as descriptive of the diagnosis, and on which the treatment is based. But there comes a time in the life history of a large number where even a correct diagnosis is futile, as far as preserving the life of the patient is concerned, because of alteration in the functionating tissues of the liver and pancreas, due to persistent infection. I believe, too, that further investigation will show that the results of this infection are chemical through the intervention of bacteria at work in ulcerating areas in the stomach, duodenum or gall bladder.

I have purposely avoided the consideration of other symptoms which will be called to mind as almost invariably present in the condition here discussed. Among these are pain radiating in the region of the right scapula or half way around the waist line on the right side; jaundice; the belching of sour gas; "cramp colic," which is a name descriptive of a condition frequently badly treated by the use of large doses of morphin. These patients are usually obstinately constipated. They

often complain bitterly of a bad taste in the mouth and are aware of a foul breath. The abdomen is, as a rule, distended with gas, showing the lessened peristalsis. They are often more hungry than otherwise; but food gives them neither comfort, satisfaction nor nutrition.

To generalize further: The individuals who may suffer or are suffering from symptoms referable to the upper abdomen range in age from the young adult to those advanced in years. As to previous symptoms, almost anything may be true, and nothing may be true. In the majority, however, two words are used which are descriptive only in a symptomatic way, and from this standpoint have had a long and useful career. I refer to "dyspepsia" and "biliousness," two words which we Americans have probably used as often as any two words in the language. Every patient suffering from a train of persistent symptoms heretofore known as dyspepsia has or has had either a gastric or duodenal ulcer, and is suffering from its sequel. Every patient suffering from recurrent attacks of so-called biliousness has either gallstones or a chronically inflamed gall bladder, which is another name for a chronically infected gall bladder. Unfortunately the class of patients which in one may seem to refer his symptoms to the stomach, in another practically the same symptoms will point to the gall bladder as the organ at fault. Fortunately, in the majority of cases, only one primary affection is present. Unfortunately it is not yet certainly known that the removal of the probable primary affection will permit of recovery from all its consequences. Frequently we find an infected gall bladder (cholecystitis) and with it the stomach is dilated. The primary condition under these circumstances will be difficult to determine, even when the abdomen is open. Such difficulties in diagnosis do not militate against the clinician, as these conditions are purely surgical, and the differentiation in many cases, as well as the proper treatment, must be made on the operating table.

Localized peritonitis and recent adhesions when the abdomen is open, will serve as infallible guides in the chronic cases with acute exacerbation; while enlarged lymphatics without adhesions will point the way in the more acute cases. Enlargement of lymphatic glands on the exterior of the body, as a result of infection of nearby tissue, has been noted for an indefinite period. Surgeons, however, were slow in recognizing the lymphatic enlargement found within the abdomen during exploratory operations as due to the same causes, viz., infections. Since the work of Poirier and those associated with him much has been done to advance our knowledge of the special anatomy of the lymphatics. Since their work appeared it has been a much simpler matter to determine the probable location of a lesion, the seat of persistent infection within the opened abdomen. The intra-abdominal lymphatics as carriers of infection open up an immense field for practical investigation as to the possibility of various recognized lesions, especially in the pancreas. Grossly we know what they can do in infections of the appendix, and as disseminators of cancer their work is all prevailing.

The writer has been interested for some years in the question of chronic infections of the liver from persistent gall bladder inflammations, with or without stones; and infections of this same organ as a result of ulcer of the stomach or duodenum. He early learned, in his gall bladder work especially, that a certain small percentage of his cases would die by slow degrees regardless of the favorableness of the primary results following operation; and that a certain other class of non-operative cases will die, with exactly the same symptoms, and when brought to the postmortem table the pathologic findings are the same in both classes of cases. The following cases will, I think, illustrate this fact very well.

May 19, 1899, I operated on Miss C., aged 26, and removed a large number of varying sized so-called mulberry calculi. Previous to her operation she had suffered from the clinical symptoms of gallstones, together with a chronic cholecystitis. The liver was not enlarged, although notes of the case made at the time distinctly state that the whole liver region was tender to both percussion and pressure made over the costal cartilages. The case was drained and made a good operative recovery, as far as the time spent in the hospital was concerned and afterward while drainage persisted. But she never fully regained her health and finally died, twenty-two months after the operation, with every symptom of internal hemorhage. Before this developed, however, she had the ordinary symptoms of a mild but persistent cholecystitis.

An autopsy was made by Drs. Jesse Rowe and J. C. Creel, both of Abingdon, Ill. They reported to me the findings as follows: About one quart of fresh clotted blood in the upper abdomen, the source of which was uncertain. A small cauliflower-like growth surrounded the common duct, which was patulous. Several soft stones were found in the gall bladder, which was fastened to the anterior abdominal wall. The inner surface of the gall bladder was inflamed and roughened, and when stretched over the finger looked like the surface of a nutmeg. The bile was thin and tarry in appearance. The liver was not enlarged, but yellow, with a gross appearance of fatty degeneration. Unfortunately, no specimens were preserved from either the liver or the growth about the common duct. At the time of the operation there was no appreciable growth about the common duct, and only the usual enlargement of the lymphatics, where sepsis is found in the gall bladder, was present.

My next fatal case came June 20, 1901, Mr. T., aged 77. He also had a history of chronic cholecystitis, with the ill health which it engenders extending over a period of years. On opening the abdomen, a greatly enlarged gall bladder was found capable of holding nearly a quart of fluid, together with a single stone weighing forty grains, which was loose in the cystic duct. The fluid which filled the gall bladder was thin, black, degenerated-looking bile, which characterizes this class of cases. The patient's liver was enlarged and tender to both manipulation and percussion. Not to burden this article with details of the postoperative history, I will merely say that this patient died in twenty-three days following operation, with a continuation of the symptoms of the same kind of infection which existed previous to his going onto the operating table. At autopsy this liver was found enlarged, and sections prepared for the microscope showed extensive fatty degeneration.

My next case of this class was Mrs. C., aged 61, operated on Oct. 2, 1901. This patient gave a history of severe gallstone attacks extending over a period of twenty-five or thirty years. She had the classical symptoms of stone in the common duct. At the operation I removed a stone from the common bile duct, the size of a pigeon's egg. Its upper or gall-bladder end was faceted in two places, showing the pressure of two additional stones; these were also removed. These two were equal in size to the first. This woman lived fifty days, dying, as the other two patients, in exactly the same way. On autopsy, this liver was found to have undergone the same fatty changes that characterized the liver in the case of Mr. T.

A few weeks ago I saw the following case: Mr. B., aged 54, but looking much older, had marked atheroma of the radial and temporal arteries, but has always been temperate as to the use of alcohol and tobacco. He has no specific history. He has suffered from chronic irritation of the stomach for twenty years and gives every symptom of chronic ulcer of the stomach, possibly now malignant. He asks relief be-

cause of what he calls his "chronic stomach trouble." Physical examination discloses a stomach with its lower border on a line with the umbilicus. Appendix tender; kidneys negative. The liver in this patient is very small, evidently markedly cirrhotic. Pressure over the costal arch elicits no pain on either side.

This case has not yet been brought to operation; but when he is, what will we find? I believe that it will be both a chronic ulcer of the stomach and a chronic cholecystitis. Further, I believe that the cirrhosis of his liver is the result of long-continued infection from his ulcer in the stomach, or the chronic inflammation of the gall bladder, or both. I believe also that Miss C., above mentioned, would have had the same kind of a cirrhotic liver as is now present in Mr. B. could she have lived long enough, i. e., had a smaller dose of a less virulent infection than she evidently did have, and had not the probable malignant condition found on autopsy intervened. As long as we have ulcer in the stomach or duodenum or an infected gall bladder to furnish a long-continued infection through the lymphatics to the liver and pancreas, we are sure to have occasionally a case which will die following operative procedures in the upper abdomen, regardless of the skill with which such operative procedures are conceived or by whom carried out.

This phase of the question of chronic symptoms in the upper abdomen as indicative of the pathology that may develop there is, I believe, most important, and so far as I know has not been thoroughly worked out, except possibly by Quincke, quoted by Eisendrath,[2] as follows:

> The clinical picture of the cholecystitis usually predominates, so that the cholangitis, with its grave influences on the liver parenchyma, is marked. The course of a cholangitis seems to be most acute with virulent colon bacilli; more chronic with staphylococci and streptococci.

These writers (Eisendrath, and Quincke, whom he quotes) make no mention of the possibility that these infections may be the cause of cirrhosis of the liver in an individual otherwise free from the usual history that precedes the average case of this disease, viz., chronic alcoholism. Eisendrath's paper,[2] is a valuable contribution to the literature of infections of the liver following acute cholecystitis.

Closely related to the above is the great question of cancer of the stomach. If overlooked, infections can produce such dire results; and, as we are slowly coming to realize that they can, what shall we say of this most terrorizing and hopeless condition of them all? You and I know that at the present day, when the diagnosis is made, the treatment in the great majority is by abandonment of the patient to his fate. We have, as yet, no means of making an early diagnosis, either in cholecystitis, cholangitis or in cancer of the stomach. But we have, as I believe I have pointed out above, symptoms which can be very nearly interpreted aright when it comes to these other conditions which are so common in the upper abdomen, certainly interpreted near enough to know that the only hope of permanent cure is by the aid of surgery. When this time comes, as it surely is coming, cancer will be diagnosed in its earliest stages when the surgical treatment will take into consideration the distribution of the regional lymphatics, which in this situation, as pointed out by Cuneo, are the most favorably situated of any in the body for permitting a radical cure. Thus in curing conditions in the upper belly, which give rise to many distressing and common symptoms, we attain a greater end in the promise of a more permanent relief for our cases of chronic infections of the liver and of gastric cancer. In the realization of this, the internist and the surgeon must join together. If they do not, the records of both in diseases of the liver, stomach, duodenum, gall bladder and pancreas will continue to be a page of regrettable failures.

2. The JOURNAL A. M. A., Nov. 30, 1901.

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## FOREIGN BODY IN THE BRONCHUS.

H. H. GERMAIN, M.D.

BOSTON.

Since 1897, when Killian of Freiburg reported his method of examining the bronchi by means of long tubes inserted through the mouth or through a tracheotomy wound, it has been extensively used. This procedure is largely confined to the location and removal of foreign bodies, but it has frequently been of value in localizing compression of the trachea from goiter and mediastinal tumors.

Up to August, 1904, there had been thirty-two successful removals of foreign bodies reported and there have been many more since that time. Under expectant treatment, these cases present a mortality variously given at from 56 to 80 per cent. Treated by tracheotomy, this rate is lowered to about 30 per cent. since a much better opportunity is furnished for spontaneous expulsion. These figures are more or less fallacious, as many of the fatal cases are probably not reported and some others considered cured probably die later of lung abscess or empyema. Some operators have "fished" blindly through a tracheotomy opening with hooks, wire loops, forceps, etc., with occasional success. Frequently this success has been due to the mechanical irritation of the tracheal mucous membrane, thus giving rise to excessive coughing and expulsion of the foreign body.

Trans-thoracic bronchotomy, either anterior or posterior, must of necessity be accompanied by a large mortality, given by some authors at 100 per cent., but it is probably somewhat under that. The operation, fortunately, has been but little used.[1]

With Killian's method, only an occasional case will be lost and this will happen when delay has given rise to changes of one kind or another in the lungs. Bronchopneumonia, atelectasis, lung abscess and empyema are among the causes of death in neglected cases.

In adults, it is considered best to introduce the bronchoscope through the mouth (superior bronchoscopy), while in infants and young children, and in difficult cases, the instrument is inserted through a tracheotomy wound (inferior bronchoscopy). Superior bronchoscopy should be avoided in young children as it has frequently been followed by edema of the larynx, which required tracheotomy.[2]

The superior operation requires skill and practice, while the inferior is easy and can be carried out by anyone who has ever used a cystoscope or endoscope. For illumination Killian uses an electric headlight or a head mirror. Instrumentation under these conditions is difficult, while on the other hand a small electric lamp at the lower end of the tube leaves a clear working field. This idea was first carried out by Dr.

1. Curtis: Ann. of Surg., 1898. Milton: Lancet, January, 1901.

2. Nehrkorn: Deutsche med. Wochft., 1904, No. 40. Heldenreich: Ibid, No. 47.

E. Fletcher Ingals of Chicago. He used a small cold lamp on a light carrier in a Killian bronchoscope. This idea came to me before I knew Dr. Ingals had used it and I had several bronchoscopes made, the feature of which is an electric lamp placed at the lower end of the tube. In this instrument, the lamp is not in the lumen of the tube, but in a groove below it and out of the field. This is an advantage over Dr. Ingals' method, as it gives more room.

The value of this instrument can be illustrated by the case report which follows, in which I used an electric endoscope, as I had at that time no bronchoscope at hand. Critics of this method of treatment say that it requires unusual skill to carry it out, but I must maintain that it does not. Anyone who has used either a cystoscope or an endoscope will have little difficulty with inferior bronchoscopy. Superior bronchoscopy,

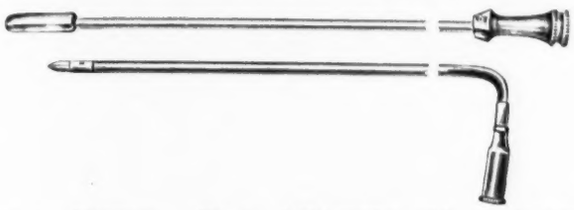

Fig. 1.—Obturator. Fig. 2.—Light carrier, with electric lamp.

on the other hand, is difficult and requires special skill. Another thing worth speaking of is the forceps designed by Dr. A. Coolidge[3] of Boston, which is much better than that of Killian, a fact easy to appreciate if one has used both instruments.

*History.*—Sept. 16, 1904, C. D., aged 21 months, inhaled a peanut kernel, which caused paroxysms of dyspnea and coughing. On September 20 respiration became so bad

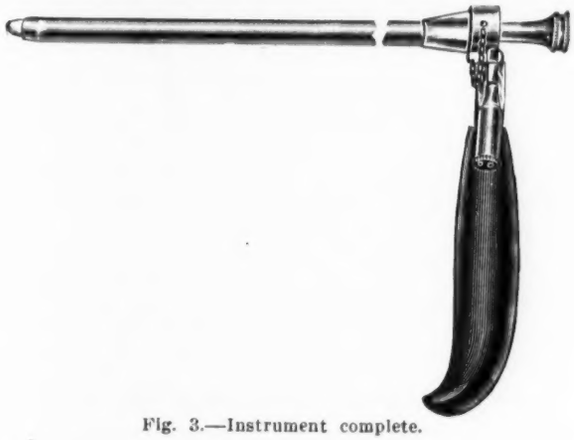

Fig. 3.—Instrument complete.

that a tracheotomy was done, but it gave no relief. On September 25 I first saw the case, with Dr. F. P. Emerson, at the Boothby Hospital. At this time the child was breathing well, but still had attacks of expiratory dyspnea in which he became almost plum colored and seemed to be suffering extremely. On the following day he was much worse, evidently failing in strength and refusing nourishment; respiration, 40; temperature, 102; pulse, 140; breathing, labored; dyspnea largely expiratory. Throughout both lungs numerous moist râles were heard. No areas of consolidation were made out. Left side of chest apparently expanded less than right and respiratory murmur was louder on the left.

*Operation and Result.*—Without anesthesia, a No. 25 F. endoscope 15 cm. in length was introduced through the tracheotomy wound. Mucus was sponged from the tube and a clear field obtained by the electric light at the lower end of the tube. The half kernel of the peanut could be seen in the right primary bronchus and was easily removed with a pair of alligator forceps. The tracheal canula was put in place for forty-eight hours and then omitted at intervals, and left out altogether after a few days. The child passed through a severe bronchopneumonia, but had no expiratory dyspnea after the foreign body was removed. The tracheotomy wound healed in a few weeks and the child is now perfectly well.

4 Arlington St.

3. Boston Med. and Surg. Jour., May, 1905.

## *Special Article*

# IMMUNITY.

### CHAPTER XVIII (CONCLUDED).

### PRINCIPLES OF SERUM THERAPY.

Attention has been directed repeatedly to a large group of organisms the toxic constituents of which are integrally associated with the protoplasm of the microbes; the toxic substances are endotoxins. Certain members of this group, of which the typhoid, paratyphoid, colon and dysentery bacilli and the vibrio of cholera are representatives, cause the development of strong bactericidal serums in the immunized animal. In Chapter XIII it was shown that such serums have no power of neutralizing the endotoxins of the corresponding organisms, hence whatever prophylactic and curative properties they may have would seem to depend on the bactericidal action of the amboceptor-complement complex. As to whether the substances which stimulate phagocytosis, i. e., the opsonic or bacteriotropic substances are of importance in the intra vitam action of bactericidal serums remains to be definitely established.

**Bactericidal Serums.**

It is common knowledge that bactericidal serums have not been successful curative agents, although in test-glass experiments they may be able to kill large numbers of organisms. Experimental work has brought to light a number of conditions which render their ineffectiveness somewhat intelligible, but has been of little service in increasing their value, and at the moment their outlook as curative agents is not very encouraging.

**Curative and Prophylactic Power.**

Animal experiments indicate that when used prophylactically they are much more powerful. Unfortunately, however, as in the case of antitoxins, the immunity which is conferred is of short duration, the serum being excreted or the antibodies destroyed within two or three weeks. For this reason they are not suited for general prophylactic use in man. They may be distinctly useful when combined with vaccination, as indicated later.

Bactericidal serums are efficient in saving experiment animals, provided the serum is injected in advance of, simultaneously with or very shortly after the bacteria are introduced. By injecting the vibrio of cholera and anticholera serum simultaneously one may readily save a guinea-pig from ten times the fatal dose, or more. If the culture be injected first and the serum later a larger amount of serum is required to save the animal. After a few hours a sufficient amount of serum to kill all the vibrios may be injected, yet the animal will die from the action of the endotoxins which have been liberated. The organisms had proliferated to such an extent that the mass, though dead, contained a fatal amount of endotoxin. A statement made previously may be repeated, that the adminstration of a bactericidal serum rather than being beneficial may actually be injurious, in that the microorganisms are dissolved rapidly and an excessive amount of endotoxin thereby liberated; this, perhaps, is not definitely established as a point of practical importance.

**Time of Injection.**

Having determined the amount of a bactericidal serum which is able to save a guinea-pig from an incipient infection, one may calculate on the basis of weight the amount which would be required to save a man under the same conditions; usually it runs up to impossible amounts, hundreds of cubic centimeters. The conditions are all the less promising when

we remember that physicians are usually called on to treat well established infections; they are beyond the incipient stage as one would speak of the incipient stage of an experimental infection.

Other conditions which operate against the effectiveness of bactericidal serums as curative agents have to do with peculiarities of complements and amboceptors.

**Peculiarities of Complement and Amboceptors.**

The lability of complement involves certain difficulties. A bactericidal serum, as one would purchase it, contains none. This difficulty may be obviated in three ways: First, one may use serums which are fresh from the immunized animal; second, one may complement the solution of amboceptors (old immune serum) by the addition of fresh serum from an immunized animal which is known to contain suitable complement; or, third, one may inject the complement-free serum and place reliance on the complement which exists in the plasma and lymph of the patient for activation of the amboceptors. It is sufficiently established that none of these procedures enhances the curative value of the serums to a satisfactory extent.

Regardless of the amount of foreign complement which is introduced, it appears to be diverted from its function. It has been shown experimentally that the tissues often absorb a foreign complement, and the mere fact that anticomplements are formed so readily also indicates that this may be the fate of complement. In accordance with a rather general principle, if the animal which furnishes the serum is rather remote from man zoologically there is all the more likelihood of the complement being fixed by the tissues.

**Absorption of Complement by the Tissues.**

It has been suggested that if one should choose for immunization animals which are closely related to man, as chimpanzees and monkeys, a double advantage would be gained: First, the foreign complement may be identical or similar to that in man and consequently would be less likely to be absorbed by the tissues; and second, the complementophilous haptophores of the amboceptors may be so constructed that human complement would serve for activation. Theoretically, the conditions would be ideal if immune human serum were available for therapeutic purposes.

**Choice of Animals for Immunization.**

If one depends on the complement in the patient's body for activation of the amboceptors, there are two possible difficulties of importance: First, the native complement of the body is often decreased during infections and in some chronic diseases and may be too little for thorough activation; second, the amboceptors of the immune serum may demand for their activation a complement or complements which the body does not contain.

Deviation of complement has been referred to as a phenomenon seen in test-tube experiments. In this condition an excess of amboceptors in some way decreases the power of the serum. It is supposed that a certain amount of the complement is absorbed by amboceptors which are unable to unite with the bacteria, and the effect is like that of too little complement. In the desire to administer a sufficient amount of antibodies, so much may be introduced that deviation of the complement occurs in the body. Results obtanied by Löffler and Able and by Pfieffer, in which excessive doses of immune serum were less protective than moderate doses, suggest the occurrence of this phenomenon in the body.

**Deviation of Complement**

In certain diseases the microbes are so situated that a serum as ordinarily administered may not be able to reach them. Pfeiffer thinks that there is little hope for the serum treatment of cholera because of the exclusive location of the living organisms in the intestinal tract. In typhoid also the intestines are a reservoir of typhoid bacilli, although the living organisms reach the circulation in abundance.

**Inaccessibility of Microbes.**

By way of summary the following conditions would appear to account for the low curative value of bactericidal serums: 1. Bactericidal serums are not antitoxic. 2. They may liberate an excessive amount of endotoxin by dissolving the bacteria. 3. The lability of complement. 4. The power of the tissues to absorb the complements of a foreign serum. 5. The lack of a sufficient amount of suitable complement in the human body. 6. The difficulty of obtaining amboceptors for which human complements are suited. 7. The possibility of deviation of complement by an excess of amboceptors. 8. Inaccessibility of the micro-organisms in certain infections (cholera, typhoid).

As pointed out elsewhere, another group of organisms the members of which contain endotoxins are able to cause the formation neither of antitoxins nor of bactericidal serums: streptococcus, staphylococcus, pneumococcus, etc. Many investigators, nevertheless, are positive in their claims that the antisera for these organisms have a protective and even a curative value. The properties on which their value depends have not been satisfactorily ascertained. Although certain antistreptococcus serums are said to be antitoxic, it is contended by others that they act by simulating phagocytosis. Work now in progress may show that immunization with these organisms causes an increase in the opsonins. Their curative value is very low in experimental work and they fail totally if injected a few hours subsequent to the introduction of the organisms. Clinically, we are familiar with them as failures.

**Other "Antibacterial" Serums.**

It is particularly in relation to the streptococcus that the so-called polyvalent serums have been prepared. Cultures of streptococcus obtained from numerous sources are used in the immunization with the expectation that the serum will be effective against various strains of streptococci. The principle may be an important one in the preparation of other antibacterial and bacterial serums.

Vaccination, or protective inoculation, being a process of active immunization, establishes an immunity of long duration, for in this instance the cells of the body continue to form antibodies over a long period. This is in contrast to the immunity of passive immunization.

**Vaccination or Protective Inoculation.**

In some instances the nature of the virus used is unknown, as in smallpox and hydrophobia; in all probability, however, it consists of micro-organisms rather than of toxins alone. In the case of typhoid, cholera, plague, and other diseases of known etiology pure cultures, living or killed, are inoculated. Protection does not follow immediately on the inoculation. We are sufficiently familiar with this fact in relation to smallpox, in which several days are required for the formation of a protective amount of the antibodies. There is reason to believe that the interval between the inoculation and the appearance of antibodies is characterized by a decreased resistance on the part of the individual, so that during this brief period he is unusually susceptible to infection. It is not yet clear that this condition is one of serious practical importance. In case the incubation period of the vaccination is shorter than that of the disease (smallpox, hydrophobia) vaccination usually is successful even if practiced within a limited time after exposure to infection.

In certain instances the nature of the antibodies is known. In typhoid, cholera, plague and dysentery, for example, they consist of bactericidal amboceptors; agglutinins and precipitins are formed incidentally. The amboceptors naturally depend on the complement of the body for their activation. If the disease is one of unknown etiology the nature of the antibodies is not easily determined. We should keep in mind the possibility that vaccination may cause an increase of the opsonins and that the potential phagocytosis may thereby become greater.

**Nature of Antibodies.**

Theoretically it would be possible to immunize man against diphtheria and tetanus by inoculating with small amounts of the corresponding toxins. Such a procedure for obvious reasons would be unnecessary and unjustifiable.

**Mixed Active and Passive Immunization.**

It is not unlikely that mixed active and passive immunization will be of great service in some infections. A successful campaign against rinderpest has been carried on in the Philippines by this method. The blood of infected cattle contains the virus, which as yet has not been cultivated artificially. The serum of cattle which have recovered from the disease, or which have been immunized cautiously with infected blood, contains the specific antibodies. Both the immune serum and virulent blood are used for the inoculations. The same principle has been found effective in experimental work with cholera, typhoid and plague. Immediate immunity is established by the serum, which would eliminate the danger period mentioned above, and before the serum disappears entirely active immunity develops.

## APPENDIX.

### "EXAMINATION OF SERUMS MADE BY LICENSED MANUFACTURERS.[1]

"The act of Congress approved July 1, 1902, entitled "An act to regulate the sale of viruses, serums, toxins, and analogous products in the District of Columbia, to regulate interstate commerce in said articles, and for other purposes," and the regulations framed thereunder, approved Feb. 21, 1903, imposed upon the director of the Hygienic Laboratory the duty of examining vaccines and antitoxins for purity and potency.

"Accordingly purchases are made for the Hygienic Laboratory from time to time on the open market by officers of the Public Health and Marine-Hospital Service stationed in various parts of the country. The antitoxin is always bought from reliable druggists, who keep the product under proper conditions of light, temperature, etc. Several grades of diphtheria antitoxin made by each licensed manufacturer are bought and sent to the Hygienic Laboratory by mail for the purposes of these tests.

"The serums are tested not only for potency, but also to determine their freedom from contamination by foreign bacteria, and finally to insure the absence of chemical poisons, especially tetanus toxin. Note is made of the physical appearance of the serum, and tests are made to determine whether an excessive amount of preservative has been added.

"A careful memorandum is made of the facts given by the manufacturer, as stated on the label, as to the number of units contained in the package, and the date beyond which the contents can not be expected beyond a reasonable doubt to yield a specific result. Note is also made of the manufacturer's compliance with the law requiring that the product be plainly marked with the name of the article, and the name, address, and license number of the manufacturer.

"Delinquencies that occasionally come to light in these examinations are at once reported to the Surgeon General, U. S. Public Health and Marine-Hospital Service, who takes the necessary steps requiring the immediate withdrawal of the particular lot of serum from the market and institutes measures to prevent a repetition of similar errors."

### "SERUM ANTIDIPHTHERICUM IN THE PHARMACOPEIA.

"The next edition of the United States Pharmacopeia, being the eighth decennial revision, 1900, which is to appear shortly, will contain an antitoxic serum for the first time. The serum will be known officially as antidiphtheric serum or *Serum antidiphthericum* and the unit will be recognized as that approved or established by the United States Public Health and Marine-Hospital Service.

"The official text, which has been kindly furnished by Professor Remington in advance, will be as follows:

#### "SERUM ANTIDIPHTHERICUM.

ANTIDIPHTHERIC SERUM. DIPHTHERIA ANTITOXIN.

"A fluid separated from the coagulated blood of a horse *Equus caballus*, Linné, immunized through the inoculation of a diphtheric toxin. It should be kept in sealed glass containers, in a dark place, at temperatures between 4.5° and 15° C. (40° and 59° F.).

"A yellowish or yellowish-brown, transparent or slightly turbid liquid, odorless or having a slight odor, due to the presence of the antiseptic used as a preservative.

"Specific gravity: 1,025 to 1,040 at 25° C. (77° F.).

"Antidiphtheric serum gradually loses its power, the loss in one year varying between 10 per cent. and 30 per cent. Each container should be furnished with a label or statement, giving the strength of the antidiphtheric serum, expressed in antitoxic units, the name and percentage by volume of the antiseptic used for the preservation of the liquid (if such be used), the date when the antidiphtheric serum was last tested, and the date beyond which it will not have the strength indicated on the label or statement.

"The standard of strength, expressed in units of antitoxic power, should be that approved or established by the United States Public Health and Marine-Hospital Service.

"Average dose: 3,000 units.

"Immunizing dose for well persons: 500 units."

1. The material for this appendix is taken verbatim from Rosenau, "The Immunity Unit for Standardizing Diphtheria Antitoxin," Bulletin No. 21 of the Hygienic Laboratory of the Public Health and Marine-Hospital Service of the United States. M. J. Rosenau is Director of the Hygienic Laboratory.

# *Clinical Reports*

## PRIMARY TUBERCULOUS MENINGITIS.

### WITH REPORT OF A CASE.

HENRY W. CHENEY, M.D.
CHICAGO.

The case which I here report illustrates the extreme difficulty of making a diagnosis in the early stages of tuberculous meningitis. As stated editorially in a recent issue of THE JOURNAL, it is perfectly possible to have a primary tuberculous meningitis, synovitis, or osteomyelitis, with no other tuberculous lesion existing in any other part of the body, and it is in support of this statement that I report the following case. This child was sick two weeks before the symptoms were clear enough to make a positive diagnosis.

PATIENT.—Alexander A., aged 3½ years, had never been sick previously and was the picture of health. One paternal grandmother and one paternal uncle had died of tuberculosis. His parents were both living and healthy and being intelligent people had taken particular care in regard to his diet, exercise in the open air, etc., so that he was apparently as normal and healthy as a child could be.

*Present Illness.*—I was summoned first on Feb. 3, 1904, when the parents complained of the child vomiting. One week previously he had indulged in some popcorn which caused a temporary gastroenteritis which cleared up in a day or two.

*Examination.*—When I saw him he was vomiting two or three times in twenty-four hours, mostly after taking food. Temperature and pulse were normal and further examination was negative, so I suggested a modification of his diet by giving him the more easily digested foods and drink and prescribed a laxative first, and then an intestinal antiseptic mixture.

*Course of the Disease.*—On the third day, there was little or no improvement, but the treatment was continued.

On the fourth day, vomiting was more pronounced and occurred each time after feeding. The mother also noticed a slight lassitude or disinclination to move about, manifesting itself more by his wanting to be held or by sitting by himself quietly or lying down more than usual. His reflexes and pupils were normal and as yet no other symptoms had appeared.

On the fifth day, ordinary food was withdrawn and he was fed a predigested beef preparation and the intestinal antiseptic and corrective continued. His temperature ranged from normal to 99 degrees and his pulse was about 80 with no irregularity.

By the seventh day, the vomiting was persistent. At times it occurred spontaneously and it did not always follow the taking of food. All nourishment by mouth was now stopped and feeding by the rectum begun. Regular enemas of peptonized milk were given and most of these were retained. Temperature now reached 99.5 at times, pulse still not affected. Pupils were normal and reflexes negative. Inactivity was slightly more pronounced and there was a greater inclination to sleep.

Dr. Frank Walls saw the patient with me on the seventh day and after a careful examination we were unable to make a positive diagnosis. The possibility of a meningitis was discussed but the symptoms were not definite enough at this time to confirm its presence. Dr. Walls advised an expectant and symptomatic line of treatment.

During the second week, the conditions continued the same, with the persistent vomiting and the inactivity of the child as the prominent features. There was no change in the reflexes or pupils. No headaches nor tenderness of the head or neck. The abdomen was not noticeably flat; pulse was regular; temperature was below 100. Examination of heart and lungs was negative. There were no twitchings of the muscles or convulsive movements. Toward the end of the second week, however, the drowsiness and lassitude had become marked.

On the thirteenth day, the case being still puzzling and doubtful, a well known neurologist of this city was called

in consultation and, after examining thoroughly, stated that in his opinion there was no meningitis present. The vomiting he explained on the theory that it was cyclic in character and the weakness and lassitude of the child as being due to a lack of proper nourishment.

On the fourteenth day, drowsiness had increased almost to coma. Pulse and heart action were slightly irregular; pupils at times were unequal. Occasionally there was a slight contraction of the cheek muscles hardly to be distinguished from a smile. The knee jerk was slightly increased.

By this time I was fairly well satisfied that the case was tuberculous meningitis and, on the fifteenth day, well-marked twitching of the face and hands was present and the first general convulsion occurred, so that the diagnosis was now quite clear. Dr. F. S. Churchill examined the case with me on that day and several times afterward and his notes have been of assistance in the subsequent history. Our examination at that time showed the child comatose—neck slightly rigid and tender; throat, lungs and abdomen negative; pupils irregular and unequal. Occasional nystagmus and slight strabismus were present. Heart action and pulse were irregular, varying from 72 to 82; temperature 99.5; respiration 12—somewhat irregular and yawning. The patellar reflex was increased; Kernig and Babinski sign absent. A blood count showed: Hemoglobin 50 per cent.; red cells 5,760,000, white cells 8,000.

From that time on, the history was typical; there was increasing weakness and coma and high temperature, and death occurred on the twenty-fourth day. A lumbar puncture was made four times altogether, on the sixteenth, eighteenth, twenty-first and twenty-fourth days and from one-half ounce to two ounces of fluid withdrawn each time. There seemed to be a slight temporary improvement after the first and third punctures and no change after the others. The first specimen of fluid was clear, the others increasingly cloudy. The first was sedimented and the precipitate was small in amount; no tubercle bacilli or other bacteria were found in this specimen. A few cells were present which were largely lymphocytes—thus agreeing with some recent French writers who claim that the cells present in the spinal fluid from this disease are largely lymphocytes as distinguished from other forms of meningitis in which polynuclear leucocytes predominate. A guinea-pig was inoculated with some of the first fluid and died in seven weeks from tuberculosis of the abdominal glands, liver and spleen. Tubercle bacilli were found, however, in the sediment of the fluid obtained from the third puncture.

*Autopsy.*—A careful autopsy was performed the day after death by Dr. H. G. Wells of the University of Chicago. On opening the abdomen, there were no peritoneal adhesions. The retroperitoneal glands were normal; the mesenteric glands were slightly enlarged, no caseation. Liver, spleen, kidneys and pancreas were all normal. In the gastrointestinal tract, there was no evidence of ulcers in the ileum. Heart and lungs were normal and there were no adhesions nor areas of consolidation on either side. The superficial lymph glands were not enlarged.

Brain and Meninges: There was an unusually large quantity of fluid at the base of the brain. From the optic commissures posteriorly along the medulla, there was a gelatinous yellowish-white material. This was very dense about the infundibulum, forming a solid mass 5 m.m. on each side. There was a dense mass around each anterior cerebral artery which seemed to invade the brain tissue. There was a slight granular exudate over the base of the frontal and temporosphenoidal lobes and cerebellum, but none over the upper portion of the brain. The fissures at the base and also the fissures of Sylvius were adherent. Along the arteries, the membranes were beaded and studded with minute white spots. A similar exudate was found between the cerebrum and the cerebellum and about all the fissures at the base. Both lateral ventricles contained a slightly turbid fluid. The membrane of the ventricles was finely granular but not thickened. The choroid plexus appeared normal. The bones at the base of the skull were perfectly normal. The fontanelles were closed and the rest of the skull was normal.

Histologically, the meninges showed all the changes of a typical tuberculous meningitis. The perivascular tuberculosis was very extensive and consisted chiefly of caseous areas. Tubercle bacilli were found in stained sections. All other organs seemed perfectly normal except for some congestion and edema in the posterior parts of the lungs. The mesenteric and peribronchial glands were normal.

In view, therefore, of the fact that the child had no symptoms of tuberculosis elsewhere in the body and that the other organs failed to show tuberculosis either macroscopically or microscopically, I believe we are justified in designating this a case of primary tuberculous meningitis.

369 East Sixty-third street.

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## GUN-SHOT WOUND OF THE STOMACH.*

R. L. MURDY, M.D.

ABERDEEN, S. D.

Although gun-shot wounds of the stomach are among the most serious which a physician or surgeon is called on to treat, modern surgery has done a great deal to place the treatment of these injuries of the stomach and of other abdominal viscera on a more scientific basis and to give more hope for recovery in a large class of these cases.

The tendency to pneumonia after the treatment of these injuries has been suggested by W. J. Mayo and is markedly demonstrated in this case.

*History of Shooting.*—On Feb. 3, 1905, at 5:30 p. m., a family fracas occurred in which the senior member of a family was used for a target by his stepdaughter, who used a 22-caliber revolver, shooting twice from in front. One shot took effect over the costal cartilages of the ribs about two inches to the left of the median line, taking a course downward, backward and to the right, and passing through all the structures of the abdomen. After striking the cartilage the bullet was deflected a little downward, thence through the stomach and into the muscles of the loin. The shooting occurred immediately after supper and the injured man had a full stomach at the time.

*Examination.*—When I arrived on the scene the patient was standing in the middle of the floor, bent forward, with his hands over his stomach and complaining of severe pain through the stomach and abdomen. He was nauseated and vomited quite freely, throwing up stomach contents and blood. His face was pinched looking and he had an extreme pallor. A slight examination was made of the wound and its course through the abdomen, and a diagnosis of perforation of the stomach was made, from the characteristic pain, the direction of the bullet and the vomiting of blood, the pallor and the pinched condition of the patient.

*Treatment.*—The patient was immediately sent to the hospital and after a hasty preparatory treatment he was anesthetized and a laparotomy was performed, the median incision being used.

The incision extended from an inch below the ensiform cartilage to the umbilicus. As soon as the peritoneum was opened, a free flow of blood and stomach contents were encountered. These were mopped out hastily and the injuries to the viscera sought for. An examination revealed a puncture of the anterior wall of the stomach midway between the cardiac and pyloric ends of the stomach and about the same distance between the greater and lesser curvatures.

As the bullet passed through the anterior wall of the stomach, it had severed one of the large arteries, and this had caused copious internal hemorrhage.

The wound in the anterior wall of the stomach was small, but very ragged. It was immediately closed by a double row of sutures, then the stomach was further raised up and retracted to one side and examined for other injuries.

The examination revealed a lacerated and punctured wound of the posterior wall large enough to admit of the tip of the index finger, which was discharging stomach contents freely. This wound was treated in the same manner as the

* Read at a meeting of the Aberdeen District Medical Society, 1905.

anterior wound, after which the other viscera were inspected. No further injury being manifest, the abdomen was subjected to a thorough cleansing with sterile gauze wrung out of sterile salt solution and a free washing with hot sterile salt solution. Lamp-wick drainage was introduced under the bile ducts and under the posterior surface of the stomach and the wound was closed by through and through sutures and the usual sterile dressing applied.

The operation lasted about one hour and fifteen minutes, being prolonged by such operative difficulties as tympany of the intestines and poor light.

In the search for injury to other viscera we were unable to trace the bullet after it left the stomach. After the operation was concluded, the patient was put to bed in fairly good condition.

*Subsequent History.*—Nothing eventful occurred until the second day, when the pulse became rapid, though the temperature was practically normal; a marked jaundice was manifest. At the end of the first twenty-four hours after the operation the first dressing was made. At this time the entire dressing was saturated with secretions carried out by our lamp-wick drainage. At the end of the second twenty-four hours, the second dressing was made and the lamp-wick drainage removed. This dressing was also fairly well saturated with secretions. On the third day the jaundice was more marked. On the fourth day, the jaundice began to fade and had about all disappeared at the end of the first week. During the first week, the patient was fed by nutritive enemata and the saline solution was continued through the first ten days, nothing being administered by the mouth, except occasional teaspoonsful of iced water. During the first ten days, the temperature ranged from 97 to 101 F. This temperature was largely accounted for by the infection of the abdominal stitches. These stitches were placed under more than ordinary tension, as the patient was very much bloated at the time of the operation and the abdominal cavity was further distended to its full capacity by saline solution.

After the tenth day the patient was fed with milk and lime water and predigested foods, plenty of liquids being administered at regular intervals. This form of nutrition was continued up to the fourteenth day, after which time he was allowed a liberal diet of light foods, both solid and liquid, and all the fluids that he desired.

During the second week the patient developed a marked dyspnea which was manifest by shortness of breath, a moderate cough and a pain in the right side on breathing and coughing. There was no spitting of blood or rusty sputum, but examination revealed consolidation of the lower lobe of the right lung and of the posterior surface of the middle lobe extending as high as the superior border of the scapula.

These conditions remained practically unchanged up to the twenty-first day, except that there was an increased temperature and pulse rate until the night of the twenty-first day, when he had a profuse sweat and the temperature fell to normal. Pain left and breathing became quite natural, this evidently being the crisis, which came suddenly and was very marked.

After this the lung conditions remained very obstinate as far as clearing and restitution of function were concerned, it being a very marked and stubborn case of delayed resolution. By the fifth week, however, the lungs were fairly clear and the patient steadily improving. This progress continued up to the forty-eighth day, at which time he was able to take short walks and to take care of himself very nicely, and was discharged from the hospital on this day.

*Remarks.*—I believe that drainage was of inestimable service in this case. The patient had comparatively thin abdominal wall and a moderately fat omentum, and this, together with the median incision, very much lessened the operative difficulties of seeing and treating the double rent in the stomach and gave ample room for inspecting other viscera and cleaning the wound.

The treatment of gun-shot wounds of the stomach as practiced by military surgeons in the field, which is shown to be uniformly unsuccessful, has led many physicians to believe that laparotomy is not indicated in these injuries, and probably some lives have been sacrificed by not treating them promptly by operation. This, however, should not be undertaken unless surroundings are favorable for clean and aseptic work.

I am indebted to Drs. Frank Miller and C. E. McCauley for valuable assistance and suggestions in the treatment and after-care of the patient. I am also indebted to the Sisters of St. Luke's Hospital for special care and preparation of the patient.

## CHRONIC PURPURA HEMORRHAGICA.

H. H. LOVELAND, M.D.
SYRACUSE, N. Y.

The editorial statement in THE JOURNAL, June 10, that chronic forms of purpura hemorrhagica are so seldom mentioned in medical literature that we are apt to regard them as being exceedingly rare, leads me to report a case that came under my observation during the years 1896 to 1903, inclusive.

*Patient.*—C. D., male, was born May or June, 1895, date not certain. His parents were of German birth, and both of them exceptionally large people, each weighing over 200 pounds, but well proportioned and in vigorous health. This child was one of twelve, five of whom died in infancy, or in very early years, the others being in excellent health.

*History.*—I first saw him with the physician who had attended him from birth, in December, 1895, and the beginning of the following year he came under my care and remained so till October, 1903. He was a large, well-formed, fat baby of 6 or 7 months. He was somewhat anemic, but there was no discoloration, sponginess or hemorrhage of the gums, no swelling of the thighs, or any of the classical signs of scorbutus. The mother was nursing him. She had plenty of milk, of a good quality. He was nursed until 18 months of age, the last six or seven months potatoes and other foods also being used. As the child developed he ate bread and butter, meat, potatoes and other vegetables, fruit, etc., the same as the rest of the family, and as they kept a cow he had plenty of good cow's milk. I do not know when the purpura began, but it must have been in the very early months, for I was told that he had received nearly every known treatment, but to no purpose thus far. From that time I had frequent opportunity to witness the appearance, course and disappearance of the purpuric areas. From the first date given until some four years later the child was scarcely ever without the spots somewhere on his body, varying in size from that of a dime to that of a small orange. One of the latter I saw on his forehead once, and, if I had not known the cause I should have thought that he had received a severe blow with consequent ecchymosis, the disappearance of the spot being the same as that from a blow—gradually turning from red to dark blue, and then greenish yellow, etc., until it faded away entirely. After his fifth year the spots appeared at gradually lengthening intervals, and the rheumatic phase of the case became more prominent. The child had severe inflammatory reaction about the joints, especially the knee and shoulder. Salicylates were administered faithfully, but apparently with no effect. He had previously had Fowler's solution, syrup of hypophosphites comp., and other tonics.

The knee became partly flexed, and in spite of all that I could do to get him to use the leg and knee or his parents to manipulate them during the intervals, he continued to go about with a partly flexed knee and used a crutch or stick to assist him in walking. His blood was thin, lacking in color, not easily coagulated, and he bled excessively from the slightest wound, though I was generally able to check hemorrhage by the use of Monsel's solution and tightly applied bandage.

The case may be considered by some as one of scurvy, but from the fact that there was no emaciation, no spongy or bleeding gums, no swelling or deformity of the thigh, leg or other bones (at least for the first five years), and also because there was no apparent reason for such trouble in the food, either as regards quality or quantity, I have not been able so to classify it. My removal from the locality has taken from my observation what was to me a very interesting case.

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## THE ETIOLOGY OF SYPHILIS.

If the causal agent concerned in the production of syphilis is still unknown, it is not from any lack of attempts to discover it. At a recent meeting of one of the German medical societies, Lassar of Berlin stated his belief that in the past twenty-five years twenty-five parasites of syphilis had been discovered. Those who remember Aesop's fable of "The Boy Who Cried Wolf" will readily appreciate the attitude of the general run of the medical profession toward anyone who comes forward with a new cause of syphilis. One is reminded, too, of the remark of the sage therapeutist, that the chance that we possessed a specific remedy for a given disease was in inverse ratio to the number of drugs which were claimed to be efficacious in its treatment. There is little doubt, however, reasoning from analogy, that syphilis is an infectious disease due to a parasite, the only point at issue being the exact nature of its cause. On account of the recent discoveries of protozoon-like bodies in certain of the exanthemata, several observers have hazarded a guess that syphilis is a protozoan infection, though one can not help suspecting that it might just as well be due to some ultramicroscopic parasite.

The latest champions to enter the lists of the parasitology of syphilis are Schaudinn and Hoffmann,[1] who claim to have discovered in various syphilitic lesions a spirochete, which, on account of its refractivity to stains, they call *Spirochæte pallida*. In their early communications, they described the organism on the surface and in the depths of primary lesions, later it was described in the juices from the indolent glands which characterize the disease. The organism was observed both in a living state and in smears stained by a modification of Giemsa's blood stain. In a living state, it appears as a very fine, slightly refractive, actively motile spirillum. It is thread-like, twisted in spirals like a corkscrew, and pointed at the ends. Schaudinn considers that it is not a true bacterium, but belongs in a class with the spirochete of relapsing fever. In stained preparations, its most prominent characteristic is its great refractivity to stains, and this probably explains why it has not been observed by previous investigators. Since the first descriptions of Schaudinn and Hoffmann several observers[2] have substantiated and extended their claims. The organism has been found by Buschke and Fischer in the internal organs of a child dead of congenital syphilis, and has been observed by Metchnikoff in the lesions of experimental syphilis in the ape. It has been noted also by several syphilologists in blood obtained by puncture of the skin lesions of the secondary stage of the disease.

One is impressed in the accounts of the various investigations with the conservative attitude assumed by the various observers. The presence of the organism is stated as an objective fact, but no one seems to have been in haste to state outright that it is the cause of syphilis. In the present state of our knowledge, this is an eminently proper attitude. It is, of course, not an impossibility that the *Spirochæte pallida* is merely a saprophyte. Many of us can remember Lustgarten's experience with his syphilis bacillus, which was shown later to be a normal inhabitant of the smegma. The fact that the organism is present in the internal organs does not necessarily militate against this view; nor must the fact be forgotten that it is particularly in the diseases which most closely resemble syphilis, the exanthemata, that secondary invaders are apt to follow close on the heels of a primary causal agent. The rôle played by the streptococcus in scarlet fever and smallpox strongly suggests that a similar process may occur in connection with syphilis. We have long been acquainted with the fact that spirochetes are normal inhabitants of the body. They have been described frequently both in the mouth and on the genitalia. While one can not but be impressed with the discoveries which have followed the work of Schaudinn and Hoffmann, all the above factors must be taken into account, and we must leaven our judgment of their achievements with a proper amount of that healthy scepticism without which permanent progress is impossible.

1. Deut. med. Woch., Vol. xxxi, No. 18. The Journal A. M. A., June 3, 1905, p. 1790. Staining technic on page 1870.
2. Ibid., July 1, 1905, p. 77.

## ENTEROGENOUS CYANOSIS.

The number of diseases marked by a severe grade of cyanosis is not large, and most of them come under two or three headings. If congenital heart disease be absent, then it is usually a case of emphysema, or the patient has been indulging indiscriminately in one of the coal tar products which, in the form of headache powders, can be purchased at any of the numerous soda water drug stores. Of late years, Osler and others have called attention to still another form of cyanosis, that which is accompanied by splenomegaly and polycythemia. In 1902, Stokvis of Amsterdam called attention to what he called autotoxic enterogenous cyanosis, and van den Bergh has recently reported two new cases of this rare condition.[1]

The symptom complex as described originally by Stokvis had as its three main features, enteritis, marked cyanosis, and a clubbed condition of the ends of the fingers. Examination of the blood, by illuminating the

1. Deutsches Arch. f. klin. Med., 1905, Vol. lxxxiii, 86. The Journal A. M. A., page 79.

hands, showed the presence of methemoglobin, and as any of the various drugs which could produce this condition were excluded, Stokvis concluded that the cyanosis was associated with the intestinal disturbance and was probably due to toxic products formed in the intestine. The three cases of Talma had similar symptoms, and this observer was able to show that methemoglobin could be demonstrated not only in the patient's circulation, but also in blood withdrawn from it. The cases reported by van den Bergh add to our knowledge of the subject, inasmuch as they show that the cyanosis is not always due to methemoglobinemia, and also that there are cases which do not show all the three cardinal symptoms. In one of van den Bergh's cases with the classical symptoms of the disease, the spectrum analysis of the blood showed that the cause of the cyanosis was not a methemoglobinemia, but a sulphomethemoglobinemia. It was shown that in this particular case, a child with a rectovesical fistula and partial obstruction of the bowels, the feces in solution, if added to blood, would produce the spectrum band of sulphomethemoglobin, and it was further shown that the feces contained large quantities of sulphuretted hydrogen. An interesting fact in connection with this case was the disappearance of the cyanosis when the intestinal obstruction was removed and the bowels thoroughly cleaned out, and its subsequent reappearance on a recrudescence of the former condition.

The pathogenesis of the condition still seems obscure. In cases where it is shown that gases like sulphuretted hydrogen are formed in the intestine this does not suffice to explain the disease, for the presence of large amounts of this gas is quite frequent in a number of pathologic conditions, and even under normal circumstances. The old Bergeon treatment of pulmonary tuberculosis by intestinal injections of sulphuretted hydrogen will be remembered by many, and it will be recalled that no cyanosis of the patient resulted from this treatment. In most of the reported cases of this condition, a true methemoglobinemia has been present, and so far attempts to explain the cause and origin of this have been unsuccessful. Knowing, as we do, that certain chemical substances have the power to produce cyanosis, it seems logical to suppose that similar substances can occasionally be formed in the body, but whether as the result of bacterial activity or not is hard to determine. Probably some abnormal condition of the intestinal wall must be present, as well as the mere presence of the poison, and probably certain kinds of food will favor the process. That this is the case was quite conclusively shown in one of van den Bergh's patients in whom the cyanosis disappeared as soon as he was put on a milk diet.

The subject is a fascinating one, but will be very hard to investigate if, as is supposed, it originates in the intestine. When we consider the vast number of chemical substances which are formed in the alimentary tube, and when we realize how inexact in some respects is our knowledge even of normal digestive processes, it seems almost like looking for a needle in a haystack to search for specific poisons in such a collection. For the present we must satisfy ourselves if we are able to recognize this symptom-complex clinically.

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## THE THERAPEUTIC VALUE OF SILENCE.

The effect of noise on those who are ill has long been recognized. Of course, from "noise" we exclude those rhythmical sounds that we call music, which are decidedly restful to most persons when tired. It is the unmusical sound that wearies. Tan bark is spread over city pavements in front of the dwellings of the critically ill, and patients are placed in quiet rooms. Hospitals are not always erected in quiet neighborhoods as they should be, but usually there is apparent some effort to protect the inmates from noises. When life hangs by a thread, absolute silence in and about the sick room often is enjoined. In fact, physicians have generally and consistently endeavored to diminish noises in the environment of the ill. Occasionally a voice is raised in protest against the multitudinous and seemingly unnecessary and steadily increasing noises that assail the ears of city dwellers. At such times the proposition has been laid down that excessive constant noises are inimical to the best state of health, and there is some demand for the protection of those who are not ill from the detrimental clatter of urban life.

While physicians have approved and practiced all these measures when applicable, and so far as circumstances permitted, it is to the neurologists who systematized the "rest cure" that we owe some appreciation of the real therapeutic value of silence in the treatment of neurasthenia and "brain-fag." Withal, however, little thought seems to have been given to the possibility of the existence of an "eartire," analogous in its reflex manifestations to "eyestrain." This conclusion, however, seems to follow naturally from the observations and methods of those experienced in the treatment of neurasthenia. Uniformly "quiet" is insisted on for these cases, and the worn out broker, as well as the weary "society" leader, is restored quickly to health by the quiet of an ocean voyage or of a remote mountain, forest, or lake resort. The elements of rest, change and air have in such cases heretofore been uppermost in our minds, but there is much ground for the belief that the relative absence of noise has been a potent factor in producing the good results of such therapeutic measures. Of course, the evil results of eyestrain, being due to abnormalities of function in a much more complex organ, are perhaps more readily demonstrable than are those due to "eartire." It has been a long and arduous task, however, to convince the world of the manifold ills resulting from unrelieved eyestrain, while physicians, as we have shown, have ever recognized some of the benefits of quiet. For certain troublesome neu-

rasthenic cases, particularly in women, this discussion suggests a practical therapeutic measure. We see women utterly exhausted by a day of noisy shopping or nearly as noisy social duty, and they seek relief in many expedients. For them prescribe each day until relieved one or two or three hours spent in the quietest available spot, and insist on even the absence of conversation and of the sounds of their own voices, for there are many who wear out their nerves talking and listening to others talk.

Many trying "nervous" cases are amenable to the "silence cure," just as so many others have been entirely relieved by the correction of errors of refraction. Many educated persons and some famous ones long since found out for themselves, in empirical fashion, the physical pleasure and nerve restfulness of periods of quiet, and physicians can not do better than learn therefrom something of the therapeutic value of periods of silence.

## THE PHYSICIAN AND THE FOURTH.

The Fourth of July has come and gone, half a hundred persons are dead and thousands injured and the count is not completed.[1] As usual, the accidents are in two classes, the immediate and the remote—in other words, the direct injuries from the explosives and the tetanus that develops later. The former are usually large wounds, the latter small and comparatively insignificant. On the other hand, the deaths caused by the former variety are few compared with those caused by the complications of tetanus in the latter. The physician's responsibility is also very different in the two classes. In the first—aside from the prompt and thorough care that the nearest medical man is expected to give in any accidental injury regardless of its relation to the Fourth—the physician's responsibility is that of any citizen in securing restrictive laws and their enforcement, and that of any other parent, adult or citizen in aiding the reckless youth to minimize carelessness and danger. As to the remote result, tetanus, however, the physician is in a particularly important position. Although tetanus may follow the most thorough treatment of a wound, the fact remains, as shown by the results of a compilation of many cases, that thorough, deep opening and cleansing of the insidious wounds prevent many cases of tetanus and that prophylactic injections of serum are of great value. Here is the physician's opportunity. Last year the following out of this principle saved many lives. Let no physician fail in his duty this year.

## CONCERNING SNAPSHOT DIAGNOSIS.

One of the temptations which come to the clinician of even moderate experience is the tendency to make diagnoses on sight, the so-called "snapshot" diagnoses. The innate desire to play to the gallery which is present to some extent in most of us, as well as the wish to appear preternaturally brilliant in the eyes of the public or the student, is the cause of this temptation. Even the most conservative among us gets into the habit of making subconscious snapshots when he almost unconsciously sizes up a patient at his first visit. While such diagnoses are occasionally justified, they are, in the long run, severely to be condemned. Certain diseases are, in their well-marked forms, so characteristic that even the tyro can hardly fail to recognize them. A number might be mentioned, acromegaly, exophthalmic goiter, myxedema, and osteitis deformans among the rest. But it is in the fruste forms of just these diseases that diagnosis may be most difficult. The habit is one which, in the long run, leads to careless observation, and while it leads to a few brilliant diagnoses, causes many regrettable mistakes. The humorous side of the matter is well illustrated by a story recounted by Byrom Bramwell in a recent address.[1] A physician who was very great on physiognomonic diagnosis in going through the wards one day directed the attention of his students to the teeth of a patient, saying that they were splendid examples of gouty teeth. The patient, seeing that the professor was so much interested, took the teeth out and handed them to him, asking if he would like to examine them more closely. A word to the wise is sufficient.

1. At 2 a. m. July 5, the Chicago *Tribune*, which has carried on such a praiseworthy agitation on the subject, had collected reports of 42 persons dead and 2,431 injured. At the same hour in 1904 there had been gathered 25 deaths and 1,977 injuries; 1903, 48 deaths, 2,936 injuries; 1902, 21 deaths, 1,978 injuries. We call attention to the fact that these figures are only of the direct results. Unless 1905 is a remarkable exception, most of the deaths are yet to occur. THE JOURNAL will collect data as usual and will report after the returns from all tetanus cases are in.

# *Medical News*

### COLORADO.

**Personal.**—Dr. Peter O. Hanford, Colorado Springs, has been reappointed health commissioner of that city.——Dr. Thomas G. Horn, Colorado Springs, who has been seriously ill, is said to be out of danger.

**Fined for Not Reporting Birth.**—Dr. Wilson W. Bredin, Denver, was the first physician to be arrested for failing to turn in a monthly record of births to the health department. He was fined $10 and costs.

**Physicians Cleared.**—Dr. Roderick J. McDonald, Leadville, physician of Lake County, who was charged by the city authorities with having failed to notify them of the existence of smallpox cases and was fined $50 and costs, appealed the case, and after corroborative testimony from other physicians, was declared not guilty.——In the case of Dr. William H. Kendrick, Colorado Springs, charged with having performed a criminal operation, the judge instructed the jury to bring in a verdict of not guilty.

**Hospitals and Sanatoria.**—A permit has been issued to build an addition to Glockner Sanatorium, Colorado Springs, to cost $10,000.——Emergency Hospital, Denver, has secured new quarters in a 27-room house, pending the completion of its new building.——St. Mary's Hospital, Pueblo, dedicated its new building with impressive ceremonies June 17. The institution now has 152 rooms.——The Elks of Denver, at a social, raised $3,011 for the transfer of their hospital ward from St. Joseph's to St. Anthony's Hospital, and for other charitable work.——The $15,000 needed to build a woman's pavilion to be added to the National Jewish Hospital, Denver, is assured.

### ILLINOIS.

**Wholesale Poisoning at East St. Louis.**—About 300 attendants at an East St. Louis Masonic picnic June 24 were attacked by symptoms of acute poisoning several hours later, it is supposed from salads which were kept in galvanized iron cans. Dr. Edward W. Cannady was one of those attacked. While many were seriously ill, no fatalities occurred.

1. Clinical Studies, vol. iii, part 2.

**Embalming and Disposal of Dead Bodies.**—Under the act providing for the regulation of the embalming and disposal of dead bodies, for a system of examination, registration and licensing of embalmers, and imposing penalties for the violation of any of its provisions, which was approved May 13, and came in force July 1, no transportation company operating in the state after September 1 will accept a body dead of any contagious or infectious disease, unless it has been prepared by an embalmer holding a license issued by the State Board of Health. After Jan. 1, 1906, any person who shall embalm or hold himself as an embalmer without first having obtained a license from the State Board of Health shall be guilty of a misdemeanor.

### Chicago.

**Personal.**—Dr. N. Senn started for Greenland July 3. He sails on the *Erie*, Lieut. Peary's supply ship, from Sydney, Cape Breton, July 12.——Dr. Vida A. Latham has been elected a fellow of the Linnean Society, London.

**Dominant Death Causes.**—The five principal death causes for the first half of 1905 were, in order, pneumonia, 2,352; consumption, 1,700; violence, 1,070; heart diseases, 1,071, and Bright's disease, 1,029. In June the order ran as follows: Consumption, 251; pneumonia, 224; violence, 187; Bright's disease, 171, and heart disease, 165. For the week ended July 1 the principal causes were: Consumption, 57; violence, 50; Bright's disease, 44; pneumonia, 41, and heart disease, 30.

**Death Causes Compared.**—As compared with June, 1904, among the important causes of death, Bright's disease, bronchitis, heart disease, measles, pneumonia, smallpox, typhoid fever and whooping cough show material increases. As compared with May, 1905, there were 99 fewer deaths under 5, and 47 fewer over 60 years of age. There were 12 fewer deaths from acute intestinal diseases; 8 fewer from Bright's disease; 14 from bronchitis; 11 from consumption; 12 from cancer; 14 from convulsions; 56 from heart disease; 5 from influenza; 6 from measles; 61 from nervous diseases; 47 from pneumonia; 20 fewer suicides and 37 fewer deaths from whooping cough.

**Low Mortality for the Half Year.**—At the close of the first six months of the year the Department of Health predicts that 1905 will establish a new record for the healthfulness of the city. This prediction is based on the fact that the average annual death rate of the first six months of each year during the ten years, 1895-1904 inclusive, was 15.51 per 1,000 of population. For the last six months of each year the average was 14.43, or 7.48 per cent. lower. The rate of the first six months of 1905 is 14.09—the total deaths being 13,918. If the second six months should be 7.48 per cent. lower than the first six months its rate will be 13.04, the total deaths for the year about 26,800, and the annual rate for 1905 will be 13.56—the lowest ever recorded for Chicago.

**Much Smallpox.**—Dr. Heman Spalding, chief medical inspector of the Department of Health, reports that during the first six months of 1905, 500 smallpox patients were removed to the Isolation Hospital. He remarks:

> The disease has been widely scattered over the city, and but for the fact that the population is better vaccinated than ever before in its history a serious and destructive epidemic would have been on us.
>
> The type of the disease this year has been severe, but the death rate has been kept down to about 10 per cent. This speaks well for the resident physician and the nurses.
>
> Of the 500 cases, 128 showed evidence of having been vaccinated somehow and sometime in early life. None had ever been revaccinated, however, and the shortest period between the early vaccination and the attack of smallpox was nineteen years; most of them were above 30 years of age.
>
> One hundred and nine were unvaccinated children under the school age of 6 years. Twenty-seven were children unvaccinated, but in school either with false certificates or in attendance in parochial schools without any certificates of vaccination. This makes a total of 138 unvaccinated children under the age of 10 years afflicted out of a total of 500 cases—nearly 28 per cent. of all cases.

### KANSAS.

**New Hospital for Newton.**—The Bethel Hospital and Deaconess Society has been incorporated under the auspices of the Mennonites at Newton The building to be erected will be ready for occupancy in the autumn.

**University Medical School.**—More than $6,000 of the $12,500 required for the temporary building of the Medical Department of the University of Kansas, at Rosadale, has already been subscribed, and the building will be ready for occupancy in September.

**Contagious and Infectious Diseases for May.**—During May there were reported to the Kansas State Board of Health 448 cases of smallpox, with 2 deaths; 98 cases of scarlet fever, with 6 deaths; 32 cases of measles; 30 case of diphtheria, with 5 deaths; 42 cases of typhoid fever, with 6 deaths, and 88 cases of, and 44 deaths from, consumption.

**Personal.**—Dr. Lot D. Mabie, Kansas City, has been appointed county physician of Wyandotte County, vice Dr. J. Frank Hassig, Kansas City, resigned.——Dr. Robert R. Teller, Arkansas City, who was recently operated on for cancer of the throat in Winfield, has been discharged from the hospital, recovered.——Dr. Lewis H. Munn, Topeka, has been appointed medical referee for the Kansas agency, and chief medical examiner for the Mutual Life Insurance Company of New York, at Topeka.——Dr. H. L. Cornell and family, who went to Burmah in October, 1903, have returned to Burlingame.——Dr. Orson F. Lewis, Garden City, has been reappointed a member of the State Board of Medical Registration and Examination.

**Conference of Health Officers.**—The second annual conference of the county and municipal health officers of the state was held in Topeka, June 27, Dr. T. D. Nichol, Topeka, health officer of Shawnee County, delivered the address of welcome; the secretary of the State Board of Health made his report on legislation; Dr. Sarah E. Greenfield, bacteriologist of the State Board of Health, described the new state laboratory, and in the absence of Dr. Samuel E. Reynolds, Clay Center, there was an informal discussion of disinfection. The afternoon session was devoted to papers on modern sanitation, to the legal status, relation to the community and relation to the profession to the health officer, and to quarantine versus vaccination in the control of smallpox.

### MARYLAND.

### Baltimore.

**Personal.**—Dr. James C. Morton is critically ill at the Maryland General Hospital with Bright's disease.——Dr. William H. Smith, late resident physician-in-chief at the Hebrew Hospital, has gone abroad to study.——Dr. Edward H. Richardson has been appointed surgical house officer at the Johns Hopkins Hospital.——Dr. Richard H. Follis, on the surgical staff of the Johns Hopkins Hospital Dispensary, who was married last week to one of the chief nurses of that institution, sailed with his bride to Europe July 1.——Dr. Lewellys F. Barker has leased for several years a house on Franklin Street, in the immediate vicinity of that formerly occupied by his predecessor, Dr. Osler. He will take possession in September.

### MASSACHUSETTS.

**Seventy-two, Not Twelve, Graduate.**—In THE JOURNAL for July 1 it was erroneously announced that a class of 12 was graduated from Tufts Medical College. The number graduated was 72.

**Harvard Commencement.**—Harvard University Medical School graduated a class of 82, June 28. Nearly all of the class are college graduates and several have the degree of A.M. or Ph.D. The degree "cum laude" was conferred on 25.

**Modified Milk for Sick Poor Babies.**—With nearly $2,500 already in hand, the Boston Milk Fund has begun its work of furnishing Walker Gordon modified milk to sick poor babies. The parents pay something, but not nearly the full expense.

**Children to Have Outing.**—About 20,000 children are to be given an outing down Boston harbor this season through the co-operation of the city of Boston officials and the interest of the Randidge fund, which was not used last year, and, therefore, amounts to $4,000.

**Park for Tuberculous.**—Boston is to have a park for the use of tuberculous patients in an open space on Parker Hill. Here the Association for the Relief and Control of Tuberculosis will receive and care for patients. Steamer chairs to rest in, tents for shelter in case of rain, two luncheons and a hearty midday meal, nurses, constant attendance and a daily visit from a physician will do much to make this day sanitarium a success. The work began July 5.

**Deaths and Disease.**—For the ten weeks ended July 1 there were reported to the Boston Board of Health 2,028 deaths, an increase of 61 over the reports of the same period last year. There were recorded 259 cases of diphtheria, with 22 deaths; 250 of scarlet fever, with 15 deaths; 96 of typhoid fever, with 10 deaths; 248 of measles, with 3 deaths; 419 cases of tuberculosis, and 260 deaths; smallpox, 1 death; pneumonia, 226 deaths; whooping cough, 5 deaths; heart disease, 228 deaths; bronchitis, 48 deaths, and marasmus, 25

deaths. Of the total deaths 292 were in infants under 1 year old, 449 in children under 5, and 481 in individuals over 60 years of age.

## MICHIGAN.

**New Hospital for Port Huron.**—The new Port Huron Hospital was thrown open to the public June 8. The building complete cost about $32,000 and has accommodations for 50 patients.

**Illicit Practitioner Goes to Jail.**—"Dr." Edward J. Bell, Detroit, was convicted of violating a medical law, and was sentenced to jail for ninety days in default of payment of a fine of $45 and $5 costs imposed.

**Appropriation for Consumptive Hospital.**—The bill appropriating $30,000 for a state sanatorium for consumptives, $15,000 for building and equipment, and $15,000 for maintenance for two years, has passed the legislature.

**Convicted of Larceny.**—"Dr." Irving E. Sanders, Detroit, who was charged with larceny by conversion of money belonging to Mrs. Rosa Jones of Tecumseh, was found guilty, and sentenced to imprisonment in the state penitentiary for not less than two and a half nor more than five years.

**Fraud Order Issued.**—The Postal Department has issued a fraud order against the Northwestern Medical Association, the Northwestern, the Lincoln Clinic and Prof. George W. Howard, in which four names a mail-order medical business has been carried on at Lincoln and Grand River avenues, Detroit.

**Fee Bill of the County Society.**—The Oakland County Medical Society has adopted a schedule of prices for coroner's cases as follows: Thirty dollars for each physician taking part in an autopsy; $25 a day for each physician giving expert testimony, while the minimum charge for viewing a dead body and testifying before a coroner's jury will be $10.

**Medical Bill Sustained.**—Dr. James D. Kennedy, Detroit, who filed a bill in the Circuit Court to restrain the State Board of Medical Registration from revoking his license to practice, has lost his case, as the circuit judge, in an opinion handed down June 2, holds constitutional the act of 1903 regulating the practice of medicine in the state, dismisses the bill filed by Dr. Kennedy, and dissolves the temporary injunction.

**Smallpox.**—By order of the Board of Health, all schools and churches in Grand Rapids were closed June 12, on account of smallpox, which has taken on the nature of a dangerous epidemic. There were at that time 75 cases in the city. Eight special physicians are conducting a vaccination campaign, but they report that a great many absolutely refuse to be vaccinated.

**State Board of Medical Registration.**—The governor has reappointed Drs. Joseph H. Cowell, Saginaw; William Bell, Belding; Henry B. Landon, Bay City; Beverly D. Harison, Sault Ste. Marie, and Albertus Nyland, Grand Rapids, members of the State Board of Medical Registration and Examination.——Dr. John L. Campbell, Birmingham has been appointed a member of the board, vice Dr. Henry B. Landon, Bay City, and will assume the duties of the office October 1.

**May Mortality.**—The total number of deaths reported for the month of May was 2,700, a decrease of 322 from April. The death rate was equivalent to an annual rate of 12.5 per 1,000, as compared with 14.4 for the preceding month. There were 456 deaths of infants under 1 year, 140 deaths of children aged 1 to 4 years, and 837 deaths of elderly persons aged 65 years and over. Important causes of death were as follows: Tuberculosis, 232; typhoid fever, 22; diphtheria, 28; scarlet fever, 5; measles, 20; whooping cough, 16; pneumonia, 171; meningitis, 43; cancer, 147; accidents and violence, 181, and smallpox, 18.

**Personal.**—Dr. Albert E. Bulson has been reappointed medical director of the Jackson City Hospital.——Dr. C. J. Sorsen, Laurium, sailed for Liverpool on the *Umbria*, June 10.——Dr. Margaret R. Otis has succeeded Dr. Millie E. Wilson as house physician of Emergency Hospital, Detroit.——Dr. C. Henri Leonard had conferred on him the honorary degree of LL.D. by Tufts College, June 21.——Dr. Theodore A. McGraw has been re-elected president, and Dr. Henry O. Walker, secretary of the faculty of the Detroit College of Medicine.——Dr. Alexander McMillan, Lansing, is now in a hospital at Chatham, Ont., as the result of injuries received by being struck by a train on the Canadian Pacific Railroad.—Drs. Howard B. Baker and Edmund Quandt have been appointed city physicians, and Dr. B. W. Pasternacki has been reappointed a city physician of Detroit.—Dr. James C. Rutledge, Detroit, has been appointed county physician of Wayne County.—Dr. Elliott K. Herdman, Ypsilanti, has been reappointed school physician.——Dr. Ernst A. Wittwer, Auburn, expects to study for a year in Europe.——Dr. Norman J. Pike has been made president of the Saginaw Board of Health.

## MINNESOTA.

**Commencement.**—The Medical Department of Hamline University, Minneapolis, graduated a class of 14 at its twenty-second annual commencement, June 5. Rev. Fayette L. Thompson delivered the commencement address, and President George H. Bridgman conferred the degrees.

**Charges Not Sustained.**—In the suit for malpractice against Dr. Charles G. Shipman, Ely, in which it was claimed that the plaintiff had not received proper treatment in and after the amputation of a leg, and that his sufferings were valued at $10,000, the jury, after forty-five minutes' deliberation, returned a verdict for the defense.

**Personal.**—Dr. George E. Benson, Minneapolis, has returned after six months in Germany and Austria.——Dr. and Mrs. Carl Klemer, Faribault, have sailed for Europe.——Dr. Charles G. Weston, Minneapolis, has been appointed a member of the Board of Charities and Corrections, vice Dr. Francis R. Woodard.——Dr. Oskar L. Bertelson has been named as city physician of Crookston.

**Hospital Notes.**—The new I. O. O. F. Hospital, Northfield, was dedicated with impressive ceremonies June 16.——Anoka, by resolution of its city council, has admitted the State Hospital into the corporate limits of the city.——A field hospital was in operation at Fort Snelling throughout the month of June.——George B. Wright will give Fergus Falls a hospital to cost $25,000, in memory of his father, who founded the city.

**Suit Settled.**—In the trouble between Dr. Sherman S. Hesselgrave, St. Paul, and Howard T. Hughes, wherein the physician sued for $105 claimed to be due for professional services, and the civilian claimed that his wife had been damaged to the extent of $500 by a hysterectomy, the case has been settled by payment to Dr. Hesselgrave of a portion of his fee, all claims for damages being released.

## NEW YORK.

### New York City.

**Aliens Have Trachoma.**—Twenty-five immigrants who arrived on the *Madonna* were sent from Ellis Island to the Long Island College Hospital suffering with trachoma.

**More Milkmen Fined.**—Heavier penalties than usual were inflicted by the Court of Special Sessions on a number of dealers found guilty of selling adulterated milk. One grocer who was convicted of the fourth offence was fined $250.

**To Fight Mosquitoes.**—The Board of Health and Dr. Doty, health officer of the port, have joined forces to wage war on the mosquitoes of Staten Island. They have asked the city for $17,000, which they think sufficient to do effective work and to furnish an object lesson and useful data for further operations.

**Contagious Diseases.**—There were reported to the Sanitary Bureau, for the week ended June 24, 769 cases of measles, with 25 deaths; 462 cases of tuberculosis, with 148 deaths; 207 cases of diphtheria, with 24 deaths; 104 cases of scarlet fever, with 9 deaths; 50 cases of typhoid fever, with 6 deaths; 42 cases of cerebrospinal meningitis, with 34 deaths, and 115 cases of varicella.

**Personal.**—Dr. August Hoch, McLean Hospital, Waverly, Mass., has been appointed to succeed Dr. Charles E. Atwood at the Bloomingdale Hospital for the Insane.——Dr. William S. Bainbridge has been appointed consulting gynecologist to St. Mary's Hospital, Jamaica, L. I.——Dr. and Mrs. Glentworth R. Butler, Brooklyn, sailed on the *Prinzessen Alice* June 29.——Dr. and Mrs. George A. Dixon sailed on the *Kronprinz Wilhelm* June 26.——Dr. William Rink, of the Cumberland Street Hospital, Brooklyn, while answering an ambulance call, collided with a car and sustained severe internal injuries.

**Hospital Patient Branded; House Physician Dismissed.**—Considerable sensation was created by the statements of Isaac Chaves, an indigent Hebrew, who claimed that he had been branded with the word "faker" at Bellevue Hospital. Investigation showed that he had been treated with the thermocautery for neuralgic pains at Gouverneur Hospital, which is

under Bellevue administration. The physician who treated him, Dr. Dubois Hunt, said that another physician who was watching him remarked, "That's a faker you have," and Dr. Hunt unconsciously traced the word on the chest of his patient. Dr. Hunt was dismissed from the service of the hospital.

## PENNSYLVANIA.

**Free Beds Endowed.**—P. F. Kernan has endowed three beds in St. Mary's Hospital in memory of Harriet Richards. The beds will be under the patronage of the Sisters of St. Francis.

**Personal.**—Dr. Edwin I. Becker, Germantown, was thrown from his carriage in a runaway accident, June 25, and painfully injured.——Dr. Robert C. Moon, vice consul for Liberia, W. A., left for Europe on the *Cedric* June 16.

**Dr. Packard Ill.**—Dr. Francis R. Packard, editor of the *Journal of the American Medical Sciences*, was thrice operated on in the Pennsylvania Hospital for an infection of his left forearm and hand which resulted from opening a postpharyngeal abscess. He has been extremely ill, but is reported to be progressing toward recovery.

**Health Report.**—The total number of deaths from all causes reported during the week aggregated 441, as compared with 551 for last week and 533 for the corresponding period of last year. The principal causes of death were typhoid fever, 14; diphtheria, 10; pulmonary tuberculosis, 52; cancer, 16; apoplexy, 22; heart disease, 34; acute pulmonary disease, 29; enteritis (under 2 years), 58; enteritis (2 years and over), 9; cirrhosis of liver, 5; appendicitis, 5, and Bright's disease, 34. There were 158 cases of contagious disease reported, with 25 deaths, as compared with 227 cases and 17 deaths for the preceding week, thus showing a decrease of 69 cases.

## TEXAS.

**Personal.**—Dr. John O. McReynolds and family, Dallas, have returned from Europe.——Dr. R. P. Harben, Richardson, has been made president of the local board of education.

**Mourns for Mellish.**—The El Paso County Medical Society at its last meeting adopted resolutions regarding the death of Dr. Ernest J. Mellish, which set forth his merits as a man and a physician, and deplored his loss.

**Graduating Exercises.**—The graduating exercises of the Medical Department, University of Texas, Galveston, were held May 31. The address to the graduating class was delivered by Professor R. R. D. Cline of the School of Pharmacy. Diplomas were conferred by President W. L. Prather on a class of 22.

**In the Hands of the Law.**—Paul J. Marks, an oculist of Houston, was fined $25 and costs for failure to pay occupation tax at Rosenberg.——In the case of W. W. Stone, Jackson County, who was fined $50 for practicing without a license and who appealed from the decision, the court of criminal appeals held that the law is constitutional.——"Dr." H. M. W. Smith, Lufkin, was fined $50 and costs at Shreveport, La., for carrying a pistol.

**State Board Appointed and Organized.**—The governor has appointed the following persons to constitute a state board of medical examiners: Drs. J. T. Wilson, Sherman; Sam R. Burroughs, Buffalo; Thomas J. Bell, Tyler; Stephen T. Turner, El Paso; Don J. Jenkins, Daingerfield; Matthew M. Smith, Austin; Thomas T. Jackson, San Antonio; Robert T. Morris, Houston, and Arthur C. Scott, Temple. At an executive session of the board June 13, Dr. Burroughs was elected president; Dr. Bell, vice-president, and Dr. Jackson, secretary-treasurer.

## WISCONSIN.

**Commencement.**—A class of 37 was graduated from Milwaukee Medical College May 15. Dr. Walter H. Nielson delivered the address on behalf of the department of medicine, Rev. R. F. Corcoran the doctorate address, and the president, Dr. William H. Earles, conferred the degrees.

**Found Not Guilty.**—In the case of F. C. Thom, Sparta, "professor" of a new method of healing, charged with practicing medicine without a license, the jury found the defendant not guilty.——Dr. Axel E. Hedback, Barron, was accorded the verdict in the $10,000 damage suit, for alleged malpractice, brought against him by one Findlay.

**Hospital News.**—Sinai Hospital, Milwaukee, has been given $5,000 by the eccentric philanthropist of Waverly, Iowa, Abraham Slimmer.——Miss Elizabeth Plankinton has given a hospital building to Milwaukee-Downer College.——Luther Hospital, Eau Claire, without capital stock, has been incorporated.——The citizens of Bloomer have subscribed $3,000 to a hospital building fund.

**State Board Denied Power to Revoke Licenses.**—The physicians of the state were unsuccessful in their fight to secure the passage of a bill giving the State Board of Medical Examiners the power to revoke the licenses of practitioners claimed to be guilty of unprofessional conduct. As it became apparent that the senate would not consent to confer this power on the state board, the physicians offered of their own accord a bill which gives the medical board practically only the power of a complaining witness and gives a physician against whom proceedings are brought for the annulment of his license the right of a trial by jury.

## GENERAL.

**Leper Hospital in Hawaii.**—Surgeon-General Wyman, who made a trip to Hawaii for the purpose, has selected a site for a leper hospital on Molokai. The site is about a mile square, near Kalawao, the eastern town on the settlement.

**Plague and Smallpox in the Philippines.**—*Public Health Reports* states that a case of plague was discovered in Cavite during the week ending May 26. Two cases of smallpox were reported in Manila during the week ending May 20.

**Plague on the Isthmus.**—No other cases of bubonic plague seem to have developed following the fatal case which was reported at La Boca. The companions of the dead man were isolated and all precautions taken to prevent the disease obtaining a foothold.

**Cholera in Manila.**—The residents of Mariquina Valley are to be indemnified for losses sustained during the cholera epidemic in Manila. The losses sustained were caused by the sanitary engineer ordering the removal of certain houses along the Mariquina River.

**American Climatological Association.**—At the annual meeting of this association, held at Detroit June 20, the following officers were elected: President, Dr. E. L. Shurly, Detroit; vice-presidents, Drs. Blackader, Montreal, and Sewall, Denver; secretary and treasurer, Dr. Guy Hinsdale, Hot Springs, Va. The next meeting will be held at Atlantic City.

**Yellow Fever in Panama.**—According to the report of Acting Assistant Surgeon Mohr, in *Public Health Reports*, yellow fever is widely disseminated both in Panama and Colon, and that in spite of extensive fumigation there still remain undiscovered foci of infection. He states that from June 12 to June 16 there have been officially reported in Panama 13 new cases of yellow fever and 4 deaths; in Colon, 1 new case and 1 death. These bring the total number of cases on the Isthmus from June 1 to June 15 to 24, with 7 deaths.

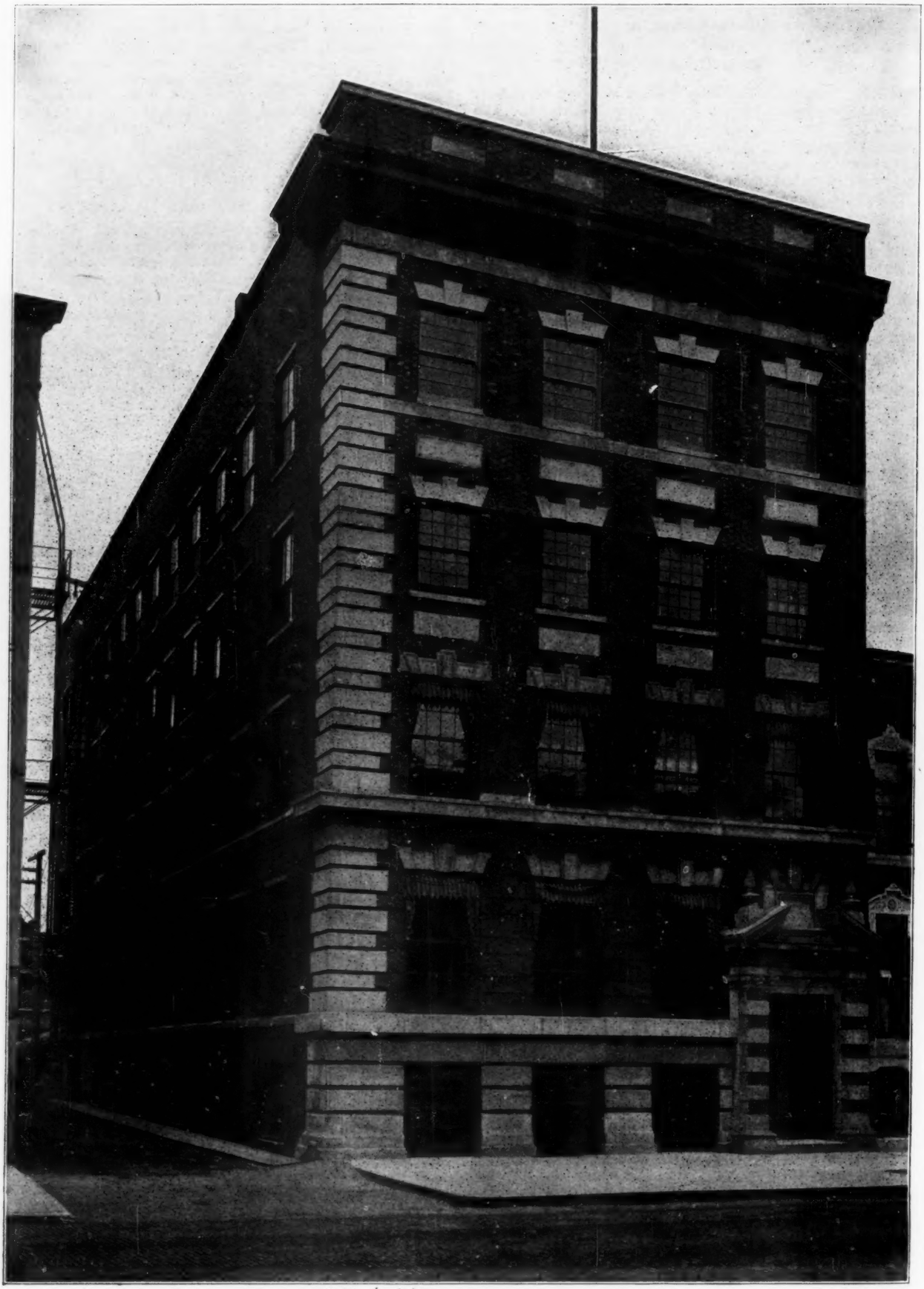
**Mosquitoes on the Isthmus.**—According to *Public Health Reports*, since the beginning of the rainy season, mosquitoes have been so abundant as to constitute a veritable plague. Even the north beach, which is generally free during the prevalence of the trade winds, is infested with swarms of them. The most prominent genus at present seen is the anopheles, although the stegomyia is also abundant. The hospital situated on the reef along the northern edge of the island, swarms with mosquitoes of all varieties, which are to be found in the nets in the screened wards. No sooner is a building opened after fumigation than it is again filled with mosquitoes. Considering the enormous area of standing water in and around the town, the problem of the extermination or even diminution in the number of mosquitoes presents almost insurmountable difficulties. Whatever has been done in the city of Colon in the way of mosquito extermination has thus far shown no results.

## CANADA.

**Personal.**—Dr. W. D. Brydone-Jack, Vancouver, B. C., has returned home after a visit at the hospitals of New York, Montreal and Chicago.

**Seek Sanitarium Site.**—A number of medical men from Winnipeg recently inspected a site for a consumption sanitarium near Holland, Man. They went out on the invitation of Dr. Pennyfather of the latter place who is furthering the movement.

**Hospital Merger Off.**—The proposed merger of the Montreal General and Western Hospitals of Montreal, which is said to have originated at McGill University, is now said to be off. The board of management of the Western Hospital is opposed to any such amalgamation at the present.



AMERICAN MEDICAL ASSOCIATION BUILDING, CHICAGO.

**Want Consumption Sanitarium.**—A deputation from the five counties of Perth, Wellington, Waterloo, Brant and Oxford waited on the Ontario Government a few days ago asking that the $4,000 grant to each of these counties for the purpose of a consumption sanitarium be doubled, as the municipalities of these counties had decided to erect a sanitarium, the first instance where any municipality or group of municipalities had sought to undertake this work in the province of Ontario.

**To Help Hospital.**—The Board of Controllers of Toronto will recommend to the Toronto City Council that a grant of $200,000 be given to the Trustees of the Toronto General Hospital toward purchasing a building site. It is further stated in connection with this matter that as soon as the money is forthcoming from the city of Toronto that each of four gentlemen in Toronto will contribute $100,000, which, along with the $100,000 given by Mr. Cawthra Mulock and the $300,000 promised by the Ontario government, will enable the board of trustees to commence operations.

**Manitoba College Matters.**—Many changes have been made in the medical faculty of the University of Manitoba at Winnipeg. Nine new professors have been appointed, and the college course has been extended to five years. The faculty as now constituted will number about thirty. Hereafter more attention will be paid to clinical work. The erection of the new medical building alongside the General Hospital, is being prosecuted vigorously, and if not completed in time for the beginning of the fall term, will be ready for occupation by the first of the year.——Alterations are proceeding at the Winnipeg General Hospital, especially in the administration portion of the old building, the entire front of which, when completed, will be taken up with offices.

## FOREIGN.

**Plague in Australia.**—Seven cases of bubonic plague occurred at Ipswich, Queensland, during the week ending May 13. All these cases were directly traceable to one produce store, which was in a dirty and dilapidated condition.—*Public Health Reports.*

**Beriberi in Nicaragua.**—According to *Public Health Reports*, on June 10, a man was taken to Bluefields suffering from the dropsical form of beriberi. He had contracted the disease in the gold mines in the Piz-Piz district. He noticed alarming symptoms exactly a month previous to the date of his death, which occurred on June 10, the day of his arrival at Bluefields. Prior to this, beriberi had never occurred in Bluefields.

**Plague in Siam.**—According to Dr. H. C. Highet, chief medical officer of the sanitary department, Siam, Bangkok, the capital of the country has been visited for the first time by an outbreak of bubonic plague. In December, 1904, the health department received information that a number of suspicious deaths had occurred on the west side of the river. On investigation it was proved that they were due to plague. There

AMERICAN MEDICAL ASSOCIATION CHICAGO PROPERTY.

The above illustration shows the American Medical Association building and houses adjoining. The property is on the northeast corner of Dearborn Avenue and Indiana Street, extending 100 feet on the former and 120 feet on the latter. In front are members of the New York and Philadelphia special party, whose call en route to Portland was mentioned in THE JOURNAL last week.

was also a history of great mortality among the rats in the locality for a week or two previous to the outbreak. The cases were practically limited to a settlement of British Indians. It was not learned how the infection entered Bangkok. Of 29 patients 23 died, a death rate of 79 per cent., which Dr. Highet states agrees with epidemics in other places in the East.

**Present Status of the Sanatorium Movement in Germany.**—A letter from Berlin in the *Münch. Med. Wochft.* for June 20, states that Germany now has more than 9,000 beds in the various public and private sanatoria for persons with pulmonary tuberculosis. Some of the beds are unoccupied during the winter months, and the directors protest against this neglect of the opportunities offered. There are also 42 special antituberculosis dispensaries, and 40 more are already planned. The number of persons able to work longer than five years after completing their course at the sanatorium is constantly increasing. The lack of sanatorium accommodations for tuberculous persons belonging to the class above the wage-earners is seriously felt. The tuberculous wage-earner is taken care of by the official sickness insurance companies, but no provision has yet been made for impecunious members of other classes of society, unable to pay for a course in a private sanatorium. Another lack is the absence of asylums for the incurable tuberculous. The main idea followed in the Berlin antituberculosis dispensary is to provide better home accommodations for the tuberculous. Arrangements are made so that each one can have a room and bed to himself, the extra expense being met by private benevolence. The letter further states that in 67 cases of human tuberculosis examined by Weber, tubercle bacteria of the human type were found in 56, those of the bovine type in 9, and in 2 both types. The advantages of the tuberculosis museum for instructing the public in measures to prevent the disease and to avoid exaggerated fear of its transmission have recently been extolled by Kayserling, who advocates popular illustrated lectures on the subject as an aid in the crusade.

**Last Illness of Mikulicz.**—THE JOURNAL mentioned last February that von Eiselsberg of Vienna had operated on Mikulicz in January on account of an umbilical hernia, and that recovery had been uneventful. This incomplete report was from headquarters, but it now develops that it was intentionally given out to conceal the true state of the case. It seems that, just before Christmas, Mikulicz had noticed a lump in the region of the stomach, and von Eiselberg's laparotomy confirmed his assumption that the lump was the metastasis of an inoperable malignant tumor in the posterior wall of the stomach, invading the pancreas. After recovery from the laparotomy, he took up his work again with renewed energy and kept in harness till the very last. His death was mentioned last week. He was a pioneer in many branches of surgery and was much loved. His father was a lawyer, and wished to have him follow in his footsteps, but Mikulicz preferred medicine and music. He supported himself during his student life by teaching music, and nearly gave up the medical career at last for that of music. The list of his published works more than fills two large columns of small print in the last *Wien. med. Wochft.*, which contains a touching tribute from von Eiselsberg. He refers to Mikulicz's trip to this country two years ago as "a triumphal procession for German science; everywhere he met old pupils, and he was invited to operate in more than twenty different clinics." He was the first to introduce antisepsis into Austria, but later discarded it in favor of asepsis, remarking that absolute asepsis is like squaring the circle. It is theoretically impossible, but it can be done approximately by the mathematician, carrying the figures well into the decimals. Asepsis is theoretically impossible, but it can be approximated so closely by using plenty of decimals that the desired result can be practically attained. He added a number of decimals by his works on the relations of glycerin to the septic cocco-bacteria, the value of iodoform, injections of nucleinic acid to enhance the resisting power of the peritoneum, etc. Every theoretical progress realized he at once sought to apply to practical use in the clinic. The profession honors him particularly for his constant efforts to prevent the splitting up of surgery into small technical specialties. He regarded, taught and practiced it as a grand whole, and protested against mutilating it by ultra specialization. If he had any specialty himself, it was in the surgery of the stomach and pancreas, but even his trained perceptions were unable to detect the signs of malignant disease until too late for successful interference at the early age of 55. He leaves a wife and six children.

## LONDON LETTER.

### Glanders in London.

The dangers to man from glanders in horses and the liability of the disease to be unrecognized has been illustrated by the following case: A horsekeeper employed by an omnibus company, in whose stables cases of glanders had occurred from time to time, complained of pain in the left side and was feverish on May 1; he was supposed to be suffering from pleurisy. Two days later he was sweating profusely and complained of pain in various joints. On May 8, he was admitted to St. George's Hospital, delirious, with a high temperature and sweating profusely. He was first treated for rheumatic fever, but pustules soon developed on the face, wrists and left ankle, and the cervical glands became enlarged. The condition was then diagnosed as septicemia. Death occurred on May 15. On the day before death it was suspected that the case might be one of glanders, and cultures were taken, which later showed the bacillus mallei. A number of horses belonging to the omnibus company were clinically found to be suffering from glanders and were condemned. The test was applied to 11 other horses, of which 7 proved to be infected and were condemned to be destroyed. Prof. Hobday, one of the inspectors of the London County Council, who dealt with the outbreak of glanders, pointed out at the inquest which was held on the man the insidious character of the disease in the horse and its apparent latency in some cases. The jury recommended that "veterinary inspectors ought to have the power to compel the owners of horses to have the mallein test applied in suspected glanders." In the house of commons the government, in reply to a question, admitted the desirability of amending the glanders order in the direction of making the mallein test compulsory, but said that there were difficulties, both administrative and financial. The government is making inquiries with a view to deciding whether any action can be taken to control the importation of horses into the country. Twelve cases of glanders have been reported to the London County Council in the last five years, but it is doubtful whether this number represents the total. In one London hospital no fewer than seven cases have been diagnosed during the last two years and all were fatal.

# *Pharmacology*

## A CRITICISM WHICH IS A COMPLIMENT.

Criticism and opposition are signs of vitality. They are sometimes the sincerest flattery, especially when their source and motives are considered. We, therefore, take pleasure in calling attention to a criticism of the work of the Council on Pharmacy and Chemistry of a "chemical company" whose hearty indorsement was never expected and whose opposition is a compliment to the work undertaken by the Council. It is contained in a little pamphlet entitled "The Added Proof," published by the Od Chemical Company, New York, and is being widely circulated with the evident purpose of discrediting the Council among physicians, without whose support this "chemical company" could not exist. The contention seems to be that a proprietary medicine of secret composition is ethical. That is a matter about which the Od Chemical Company is entitled to hold its own opinion; and it ought to be willing to concede the same right to physicians.

The "criticism" is introduced with a biblical quotation: "——, where the evil spirit (sic) answered the seven sons of Sceva, and said 'Jesus I know, and Paul I know; but who are ye?'—and here is their patriotic answer, which they seem to think, settles the ethical status of their product: "In all seriousness, whence emanates all this matter? It comes not from liberty-loving Americans—the influence must come from abroad; from those raised and nurtured under monarchical or despotic institutions, accustomed to their every imagination, thought, word and act being gauged, guarded and governed by State Rule, and hence unable to live a free, self-moving-life, but rather longing for guardianship and restraint, and naturally wishing, under the pretense of Ethics, or what-not, to force a muzzle on every one else. Let us in America have none of it! 'Eternal vigilance is the price of liberty.'" [The latter sentiment we heartily indorse, although we do not see just where it applies in this case.]

We have received many letters and copies of the circular referred to from physicians, but this week can give space to the following only:

Dr. H. P. Mills, Sheridan, Mo., says:

"We have often heard of Satan quoting scripture to prove his point; but this case is unique, in that it is one of admitted identity."

Dr. Hollingsworth of Brazil, Ind., sends in the following copy of a letter he wrote to the Od Chemical Company:

"Your pamphlet, 'the Added Proof,' has just been received. I have been tempted to make your acquaintance on several occasions, but since reading the above pamphlet, am very glad to say that I did not bite. You might be surprised to know how many physicians will be likewise impressed. I am sorry to acknowledge that there is an unthinking class of so-called physicians who prescribe such preparations as you advertise, on the testimony of some deluded doctors and the positive assertion made by your advertisement writer. However, we take consolation in the fact that other lines of business have this same class with which to contend—even all manufacturing chemists (I judge by your literature) are not above reproach. Kindly drop my name from your advertising list and oblige."

Dr. John Dice McLaren, New York, says:

"A circular named 'The Added Proof' is now being 'issued to physicians only.' One must consider the source of such a personal and professional affront. The 'Od Chemical Company' must have a private telephone, the number not being in the directories. In the Co-partnership and Corporation Directory 'Od Chemical Company' carries the legend that 'Further information "refused."' When the business world is thus treated, the professional world can not hope to be favored with enlightenment. 'Od Chemical Company, will not answer its own question, 'Who are ye' 'Let the galled jade wince.' We are in the right, so go ahead."

Had Dr. McLaren called at the office of Dr. J. J. Lawrence, we believe he might have obtained all the information he desired regarding the Od Chemical Company. While our correspondent is about it, we wish he would find out the exact relationship of the Dad Chemical Company to the Od Chemical Company; the Od Chemical Company to the Sultan Drug Company; the Sultan Drug Company to the Rio Chemical Company; the Rio Chemical Company to the Battle & Company; Battle & Company to the Peacock Chemical Company; the Peacock Chemical Company to the Dad Chemical Company, and all of them to that great representative monthly medical journal that was published for so many years in St. Louis and which now emanates from New York.

EXTRACTS FROM THE ADVERTISING LITERATURE.

A cursory glance through this pamphlet, "The Added Proof," "issued to physicians only," shows that there are back of its publication two purposes—one to ridicule the work of the American Medical Association in organizing the profession and its efforts through the work of the Council on Pharmacy and Chemistry, to get rid of the secret nostrum evil and the other to advertise sanmetto. Just what sanmetto is we do not know, but if we are to take the word of the Od Chemical Company it is "a scientific blending of true santal and saw palmetto in a pleasant, aromatic vehicle." We did not know that saw palmetto and santal were such valuable drugs—we do not find anything to indicate this in our text-books, but evidently these drugs have wonderful virtues if we are to judge by the claims made for them by the Od Chemical Company in their advertising literature.

Sanmetto is not only advertised as a positive cure in the diseases in which the drugs composing it used to be thought valuable, but also in la grippe and its sequelæ; but what physician with even a superficial knowledge of the physiologic and therapeutic action of drugs would prescribe either santal or saw palmetto in influence?

We are sure that the following testimonials from physicians—not from laymen, remember—will prove interesting reading. It should be understood that this is not "a patent medicine" and that the following is not an appeal to an ignorant public:

"To whom it may concern: I have used Sanmetto * * * * also in prolapsus of bladder in women, where congestion of the ovaries and enlargement of the uterus was the cause, with very gratifying results. J. C. MAXWELL, M.D., Paw Paw, Mich."

"Have used Sanmetto in my practice for a number of years. * * * * Would recommend its use in senile bronchial troubles. ORVILLE CURTIS, M.D., Buchanan, Mich."

"I used Sanmetto in the case of a man 50 years of age who had suffered from la grippe, leaving him very nervous and weak, with deposits in his urine. Very great depression and almost entire impotence. One eight-ounce bottle of Sanmetto with one-sixtieth (1-60) grain of strychnia almost completely cured him. * * * * ELBERT L. FISH, M.D., West Valley, N. Y."

"I have found Sanmetto useful in several cases of neurasthenia from overwork in intellectual lines without being associated with sexual irritations or excesses. In those case where it seemed to do the most good there was depression of energy consequent upon exhaustion of the vital forces * * * * * M. W. VAN DENBURG, M.D., Mount Vernon, N. Y."

The makers also state in their advertising literature:

"In uterine atrophy, dependent on ovarian blight (What is ovarian blight?) its action is unexcelled. In gynecological practice it is much used to promote the growth of the mammæ."

Physicians who are so emphatic in their denunciations of the advertisements of patent medicines in the lay press are respectfully invited to compare those advertisements with the foregoing, which is only a sample of the "literature" sent to physicians by the Od Chemical Company.

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**Publishing Medical Journals for Private Profit or for the Profession.**

*American Medicine* comments, July 1, as follows: "There is a splendid, and perhaps unexpected, result of the plan of the American Medical Association as to nonsecrecy in the drugs used by or advertised to the profession. It has forced into the open, or will inevitably do so, the concealed journalistic supporters of the nostrum traffic. By doing this, it will as certainly expose the so-called medical journals which do not care a fig for the medical profession they have so long deceived and exploited, and which have been published solely for the financial benefit of the owners and their compliant editors. One can never cease hammering that in the professional use and control, indeed in the professional ownership of its medical literature, lies a vast deal of the progress of medical ethics, art, and science. The action of the American Medical Association cuts sharp and clear with these pseudos, and says: "On this side the sheep, on that the goats." One of our contemporaries has come out frankly and says: "We are heart and soul with the goats, and for profits in the advertising business." Another gibes at the attempts of the "reformers," "the cackle of some young and eager reformers," criticises, charges with many innuendos that some of the American Medical Association council members are in the pay of manufacturing companies, and otherwise shows plainly its sympathies, "letting 'I dare not' wait on 'I would.'" Come now, gentlemen—journalists, editors, publishers, subscribers and contributors—no befogging will avail. Choose your party! Physicians must know where you stand, and writers of medical articles must know where to send them for publication."

**Nostrums in New Zealand.**—"In accordance with the terms of the public health act of 1900, the governor in council has proclaimed that all patent medicines on sale here must bear, legibly printed in English on the wrapper, a statement of their contents and the exact proportions in which these are compounded. When any of the medicines contain any of the poisons included in the sale of poisons act schedule the words 'This contains poison' must be clearly printed on the label. A penalty of $25 is attached to the offense of affixing to these medicines any but the genuine formula, and it is evidently the intention of the public health department to see that the new regulations are literally and strictly carried into effect."—From report of Consul-General Dillingham, Auckland, New Zealand.

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## *Correspondence*

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**Catholic Teaching as to Operations for Ectopic Pregnancy.**

COLUMBUS, OHIO, June 14, 1905.

*To the Editor:*—In THE JOURNAL, June 10, page 1868, appears a letter from W. P. Whelan, professor of medical jurisprudence, Creighton Medical College, on the subject of the doctrine of the Catholic Church as to Cesarean section for placenta prævia. In this he brings up, but does not make to my mind entirely clear, the teaching of the church as to operations for ectopic pregnancy. Professor Whelan—as I understand it—is himself a Catholic, the author of a book on this

subject, and assumes to speak *ex cathedra*. His book, which I have, mentions this same subject, but in that also his language is not entirely clear.

It must, of course, be conceded that in any case of unruptured ectopic pregnancy, as it presents itself to the surgeon, it is possible that the tube may so rupture as to permit the fetus to live and develop to full term, so that it may be extracted after the period of viability, and thus both mother and child perhaps be saved. Even after rupture it is as a rule impossible to state that the mother in any particular case is necessarily doomed unless there is surgical intervention, and that the child may not possibly go on to the age of viability. That the surgeon will witness a vast number of fatal issues while waiting for a possible successful case is, of course, well known, but the possibility of a successful issue is conceded.

The questions, therefore, that I would like to have answered categorically are these:

1. Is the surgeon permitted by the Catholic Church to operate on a case of unruptured tubal pregnancy?

2. Is he permitted to operate after rupture until he is positively sure that the fetus is dead? And can he ever be thus positively sure?

3. If the Catholic surgeon is not permitted thus to operate, is not permissible for sisters in charge of hospitals to allow non-Catholic surgeons to operate in these cases?

I am especially interested in the matter because of my reading of Professor Whelan's book, and also because the subject has been a source of discussion between myself and a fellow-surgeon who is a Catholic. J. F. BALDWIN.

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OMAHA, June 17, 1905.

*To the Editor:*—Before answering the queries propounded by J. F. Baldwin, M.D., I would like to inform him that there seems to be a case of mistaken identity in the introduction of his paper. He credits me with the authorship of Coppen's "Medical Jurisprudence," written by my esteemed predecessor in that chair at Creighton Medical College. The book referred to above contains in its last edition later decisions of the court decisions given on the fifth of March, 1902. In the light of these decisions, whatever haze there may have been heretofore with regard to ectopic operations has been dispelled.

This very decision is in fact an answer to the first query; before the period of viability he is not allowed; when the fetus is viable he may operate in a case of necessity, with the proviso that he looks after the life of the fetus as well as that of the mother.

With regard to the second query, he is not allowed to operate either before or after rupture unless the fetus is viable (see answer to first query). If he is positive that the fetus is dead he may remove it. Whether he can ever be thus positively sure or not is a question that pertains strictly to the physician's or surgeon's science alone, and therefore does not come within the province of medical jurisprudence.

In answer to the last question I think Dr. Baldwin will agree with me when I say that it is impossible for the sisters to take cognizance of every operation; on the supposition, however, that they do know of such operations, they are not allowed to tolerate them, because in their position, they would be morally responsible, and therefore culpable, since they would be co-operating in the crime.

The question of such operations, however, is not a specifically Catholic one. The Catholic Church does indeed condemn any action or operation which has for its object the destruction of the infant for the safety of the mother, and bases her position on the command, "Thou shalt not kill," a command that asserts God's inviolable dominion over life and death, a command that is as much applicable to the child *in utero* as to the child just born. And she is not alone in her view, but is supported to-day by the common judgment which ascribes to the physician no greater right over life than it does to any one else. W. P. WHELAN.

# Association News

### The First Person Operated on for Gallstones.

An interesting feature at the Portland session will be the exhibition of probably the first patient operated on for gallstones, Mrs. Z. Burnsworth, McCordsville, Ind., who was operated on June 15, 1867, by Dr. John S. Bobbs. A reprint from the *Indiana Medical Journal*, July, which is to be distributed in the Scientific Exhibit at Portland, contains a history of this first operation and sketches of Dr. Bobbs, and is illustrated by portraits of Dr. Bobbs and the patient. There is also a photograph of the Medical College of Indiana, one of the institutions with which Dr. Bobbs was connected. Through the efforts of this college the patient is to be exhibited at Portland. The reprint bears the following dedication:

> "This reprint is dedicated to the American Medical Association in session at Portland, Oregon, June 11-14, 1905, in memory of Dr. John S. Bobbs of Indianapolis, the founder of the surgery of the gall bladder, by the Medical College of Indiana, the *Indiana Medical Journal*, and the Indianapolis and State Medical Societies which Dr. Bobbs assisted in organizing, and on behalf of the thousands of patients whose lives have been made happy and prolonged by this beneficent operation."

Dr. A. W. Brayton, editor of the *Indiana Medical Journal*, and Drs. W. N. Wishard and L. H. Dunning, who will present the case before the Section on Surgery and Anatomy, deserve much credit for this interesting historical presentation.

### The General Reception.

The general reception to the members of the American Medical Association, to be given by the Portland City and County Medical Society and the state and district societies, will be held at The Oaks, and not at the Lewis and Clark Fair grounds. It will be a social function, at which the ladies as well as the gentlemen will be present, and it promises to be something to be long remembered by all who attend.

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### NEW MEMBERS.

List of new members of the American Medical Association during the month of June, 1905:

**ALABAMA.**

Gaines, T., Mobile.
Farish, L. B., Atmore.
Hitchcock, M. S., Brookwood.
Moore, D. S., Clarence.
Nabers, F. E., Birmingham.
Peters, U. J. W., Birmingham.
Shamblin, A. C., Gaylesville.

**ARIZONA.**

Hetherington, A. J., Phoenix.
Shattuck, H. P., Tucson.
Tarbell, Brent C., Naco.

**ARKANSAS.**

Simmons, W. H., Fordyce.

**CALIFORNIA.**

Blythe, T. M., Redlands.
Berry, A. J., Los Angeles.
Case, C. L., Oakland.
Cornwall, F., San Francisco.
Deering, W. E., Hollywood.
Hagadorn, J. L., Los Angeles.
Hewlett, A. W., San Francisco.
Hasson, D. W., Buena Park.
Ide, Chas. E., Redlands.
McLean, A. D., San Francisco.
Mattison, S. J., Pasadena.
Orella, F. R., San Francisco.
Shelton, A. H., Long Beach.
Smith, R. J., Milpitas.
Thompson, W., San Bernardino.
Thompson, J. E., San Francisco.

**COLORADO.**

Cooper, C. E., Denver.
Sheldon, J. E., Telluride.

**CONNECTICUT.**

Gill, M. H., Hartford.
Rising, H. B., So. Glastonbury.
Pierson, John C., Hartford.
Young, C. B., Middletown.

**DIST. OF COLUMBIA.**

Arnold, J. S., Washington.
Balloch, E. A., Washington.
De Vries, J. C., Washington.
French, Wm. B., Washington.
Marbury, C. C., Washington.

**FLORIDA.**

Barnes, B. F., Chattahoochee.
Bond, B. J., Tallahassee.
Diggett, E. W., Daytona.
Light, S. D. W., Key West.
Warren, E. W., Crescent City.

**GEORGIA.**

Gaines, L. M., Atlanta.
Wright, H. S., Atlanta.
Dexter, C. A., Columbus.
Kennedy, W. D., Metter.

**IDAHO.**

Aulguire, J. A., Pocatello.
Alexander, M. E., Mullan.
Bowers, L. C., Boise.
Boyd, T. O., Twin Falls.
Fairly, J. M., Oro Fino.
Hyde, Geo. Ed, Rexbury.
Lewis, J. B., Boise.
Neilson, A. F. O., Oakley.

**ILLINOIS.**

Foulon, J. J., French Village.
Foulon, Z. S., French Village.
Collins, M. V., Barry.
Cargill, C. W., Mason City.
Duncan, F., Chicago.
Ferguson, R. R., Chicago.
Hutchinson, E. B., Chicago.
King, O. A., Chicago.
Kaczorowski, J. P., Chicago.
Kerr, E. D., Westervelt.
Leahy, J. E., Chicago.
Livermore, W. H., Plattville.
Marquardt, E. W., Bensenville.
Manuel, W. S., Chicago.

Merki, E. J., Chicago.
Moserve, A. G., Robinson.
Napieralski, E. F., Chicago.
Potts, F. T., Toluca.
Pearce, Beatrice, Waukegan.
Rutledge, G. F., Chicago.
Rutledge, J. A., Elgin.
Ritter, John, Chicago.
Ruehl, M. C., Chicago.
Stol, S., Chicago.
Schurmeier, C., Chicago.
Studer, E., Peoria.
Stafford, T. J., Stockton.
Vanderhoof, D. A., Byron.
Way, H. J., Chicago.
Weisskopf, M. A., Chicago.

INDIANA.

Dryer, D. W., La Grange.
Ferguson, C. E., Indianapolis.
McEvoy, Jas. B., Ft. Wayne.
Sigmond, H. W., Crawfordsville.
Whitesides, Franklin.

INDIAN TERRITORY.

Callahan, Jas. O., Muskogee.

IOWA.

Agnew, F. F., Independence.
Chassell, J. L., Iowa Falls.
Downs, J. A., Glidden.
Dakin, C. E., Mason City.
Holmes, W. W., Keokuk.
Jennings, F. B., Drakeville.
Nye, H. W., Lovilia.
Rogers, E. B., Waterloo.
Sage, F. C., Waterloo.
Shively, —, Sheldah.
Sugg, H. R., Clinton.
Sheldon, B. L., Cedar Rapids.
Tinley, M. A., Council Bluffs.
Wade, Chas. M., Sioux City.

KANSAS.

Alexander, J. B., McPherson.
Cole, C. W., Norton.
Davis, O. P., Topkea.
Scott, T. W., Stafford.
Schoor, W. F., Hutchinson.

KENTUCKY.

Brook, G. S., Bush.
Bowman, Wm., Tolesboro.
Brown, F. M., Hopkinsville.
Coleman, J. S., Frankfort.
Hill, A. F., Vanceburg.

LOUISIANA.

Lafleur, A., Opelousas.
O'Connor, A. T., Neame.
Seebold, H. B., New Orleans.
Smith, M. F., Shreveport.

MAINE.

Cragin, D. B., Waterville.
Gehring, E. W., Portland.

MARYLAND.

Atkinson, A. D., Baltimore.
Bromwell, J. E., Mt. Airy.
Brotemarkle, C., Vienna.
Dyson, V. H., Laytonsville.
Eversfield, W. O., College Park.
Franklin, C. M., Towson.
Hendrix, J. O., Frederick.
Hammon, L. V., Baltimore.
Likes, S. H., Baltimore.
Lang, J. D., Baltimore.
Neale, L. E., Baltimore.
Whitridge, Wm., Baltimore.
Wagner, Wm. H., Woodsboro.

MASSACHUSETTS.

Aldrich, A. C., Somerville.
Amadon, A. F., Boston.
Birmingham, R. M., Lawrence.
Bennett, W. H., Hyde Park.
Butler, Wm. H., Fall River.
Briggs, F. M., Boston.
Broughton, H. W., Boston.
Bryson, A. A., Fall River.
Comey, P. P., Worcester.
Campbell, B. F., E. Boston.
Dame, F. R., Medford.
Dean, R. D., Taunton.
Draper, A. D., Boston.
Farr, E. L., Roxbury.
Fiske, E. L., Fitchburg.
Fisher, I. J., W. Newton.
Howe, W. C., Boston.
Howard, H. B., Boston.
Hurd, A. G., Millbury.
Hill, G. J., Beverly.
Hamilton, R. D., Newburyport.
Holmes, May S., Worcester.
Homans, John, Boston.
Hinkiss, George, Boston.
Jelly, A. C., Boston.
Jones, D. F., Boston.
Knight, Chas. L., Boston.
Keleher, Wm. H., Woburn.
Lindsey, J. H., Fall River.
Lambert, J. H., Lowell.
Lord, F. T., Boston.
Lovell, D. B., Worcester.
McLeod, J. S., Boston.
Morgan, L. E., Brookline.
Morse, E. G., Roxbury.
MacArthur, Geo. E., Ipswich.
Ott, Geo. J., Clinton.
Osgood, George, Boston.
O'Neill, R. F., Boston.
O'Sullivan, J. J., Lawrence.
Palfrey, F. W., Boston.
Parker, R. W., Lowell.
Rowen, H. S., Boston.
Sawyer, W. F., Fitchburg.
Smith, E. S., Westfield.
Stedman, J. C., Boston.
Sughrue, D. F., Roxbury.
Starbuck, J. C., North Easton.
Tolman, Julia, Arlington, Mass.
Townsend, David, Brookline.
Torbert, Jas. R., Boston.
Verhoeff, F. H., Boston, Mass.
Wadsworth, O. F., Boston.
Woodward, L. F., Worcester.
Walker, Wm., Boston.
Wentworth, A. H., Boston.
Williams, Harold, Boston.
Young, J. F., Newburyport.
Young, E. B., Boston.

MICHIGAN.

Allen, R. C., St. Joseph.
Baird, R. H., Howell.
Clarke, G. M., Detroit.
Drummond, C. A., Painesdale.
Ditmars, W. R., North Adams.
Kerry, F. M., Benton Harbor.
Lenhard, C. A., Detroit.
Olson, R. G., Muskegon Heights.
Niles, H. R., Flint.
Rutledge, Frances E., Newberry.
Sicott, R., Sparta.
Schwendner, Hattie A., St. Joseph.
Thomas, E. P., Scottsville.
Thomas, B., Jackson, Mich.
Witt, Edw. J., St. Joseph.

MINNESOTA.

Christie, G. R., Long Prairie.
Dutton, C. E., Minneapolis.
Foster, N. W., St. Paul.
Hulburd, H. L., Morris.
Lapierre, C. A., Minneapolis.
Oredson, O. A., Duluth, Minn.
Rishmiller, J. H., Minneapolis.
Roberts, C. B., Minneapolis.
Spratt, C. N., Minneapolis.
Smith, D. D., Mankato.
Theissen, Wm. N., Henderson.

MISSISSIPPI.

Buck, H. C., Friars Point.
Jackson, J. S., Belzani.
Marsalis, W. L., Centerville.
Smith, W. D., Franklin.
Washington, J. J., Pass Christian.

MISSOURI.

Goodson, E. N., Hopkins.
Laurazana, L., Kansas City.
Shotwell, C. B., Richmond.

MONTANA.

Blair, J. F., Bozeman.
Grigg, J. A., Butte.
Riddell, W. C., Helena.
Salvail, N., Helena.
Ward, A. L., Boulder.

NEBRASKA.

Loughridge, W. K., Milford.
Zerzan, G. F., Milligan.

NEVADA.

Morrison, S. K., Reno.

NEW HAMPSHIRE.

Day, H. C., Exeter.
Faulkner, H. K., Kene.
Stillings, F. A., Concord, N. H.

NEW JERSEY.

Dubell, J. E., Columbus.
Gorton, E., Summit.
Fewsmith, J. L., Newark.
Fewsmith, J., Newark.
Martland, W. H., Newark.
Robinson, B. A., Newark.

NEW MEXICO.

Leavel, R. V., Silver City.
McNeill, R. I., Mescalero.

NEW YORK.

Doty, A. H., Quarantine.
Gillette, A. A., Rome.
Gosney C. W., New York.
Dugan, John, Albion.
Hallock, L. R., New York.
Jarcho, J., New York.
Lesem, Wm. W., New York.
Miglionico, G., New York.
Pearce, R. M., Albany.
Pierce, L. R., Newburgh.
Thompson, E. C., Newburgh.
Wakeman, B. R., Hornellsville.
Williams, H. T., Rochester.

NORTH CAROLINA.

Boyles, J. H., Greensboro.
Burt, S. P., Louisburg.
Candler, Chas. Z., Dillsboro.
Davis, A. P., Winston-Salem.
Graham, G. A., Raeford.
Harrill, L. B., Caroleen.
Hicks, I. F., Dunn.
Liggett, N., Hobgood.
Lee, L. V., Lattimore.
Martin, S. L., Leaksville.
Paddison, J. R., Oak Ridge.
Robinson, Frank, Lowell.
Royster, S. S., Mooresboro.
Steele, Wm. H., Rockingham.
Winchester, F. M., Charlotte.
Young, R. S., Concord.

OHIO.

Bliss, C. B., Sandusky.
Brown, H. J., Ironton.
Cameron, E., Lorain.
Cummins, G. M., Hamilton.
Dreyfoos, Max, Cincinnati.
Klaus, M. H., Cleveland.
Kurtz, C. D., New Philadelphia.
Lowry, A. C., Ironton.
Linn, F. W., Cleveland.
Lukens, Chas., Toledo.
Nash, A. C., Glenville.
Oliver, J. A., Steubenville.
Podlewski, S. J., Steubenville.
Robb, I. H., Newark.
Spence, A. D., So. Lebanon.
Tims, W. A., Cleveland.
Weeks, E. A., Akron.
Welch, A. J., Mt. Sterling.

OREGON.

Buck, Louis, Portland.
Chance, A. W., Portland.
Fenton, H. C., Portland.
Fessler, Theo., Portland.
Gray, E. L., Portland.
Gray, K. P., Portland.
Gillespie, R. L., Portland.
Hamilton, L. H., Portland.
Hamilton, W. B., Portland.
Hill, C. E., Portland.
Hill, S. S., Portland.
Little, E. G., Portland.
Logan, R. W., Moro.
Loughridge, S., Grant's Pass.
Mount, H. S., Oregon City.
Parker, E. H., Portland.
Pohl, Emil, Portland.
Prinzing, J., Ontario.
Ricen, Leo, Portland.
Slocum, S. C., Portland.
Walker, R. C., Portland.
Wood, Wm. L., Portland.
Whiteside, Sarah, Portland.
Wetherbee, J. R., Portland.

PENNSYLVANIA.

Bacon, John, Philadelphia.
Berens, Conrad, Philadelphia.
Baker, Hugh, Leisenring.
Carey, R. B., Glen Luch.
Care, J. R., Norristown.
Doane, L. L., Butler.
Dunn, J. S., Pittsburg.
Davis, A. M., Philadelphia.
Ferguson, Albert, Philadelphia.
Findley, J. D., Altoona.
Fackler, L. H., York.
Frantz, G. B., Coal Center.
Furnee, C. H., Marshalsea.
Gundy, C. A., Lewisburg.
Heilman, R. P., Emporium.
Henderson, J. L., Osceola Mills.
Kress, F. C., Lilly.
King, I. K., Pittsburg.
Lindley, D. C., New Castle.
Logan, Orlando, Girard.
Lefever, E. K., Boiling Springs.
McGeagh, A. C., Pittsburg.
Missett, J. V., Philadelphia.
Maclay, D., Chambersburg.
McNeely, J. F., Munhall.
McGeary, W. J., Sharpsburg.
O'Neill, M. P., Philadelphia.
Price, A. D., Pittsburg.
Quiney, J. J., Easton.
Robinson, E. T., Philadelphia.
Roach, T. E., Renovo.
Rowles, J. F., Mahaffey.
Redeker, F. W., Bloomsburg.
Rice, N. S., Durham, Pa.
Runkle, S. C., Philadelphia.
Stanton, W. B., Philadelphia.
Stahlman, F. C., Charleroi.
Smith, R. S., Saegertown.
Schultz, J. Wm., Tremont.
Saylor, E. S., Philadelphia.
Shoemaker, Harlan, Philadelphia.
Trimbath, W. P., Everett.
Trout, N. C., Fairfield.
Taylor, H. F., Ridley Park.
Venus, C. H., Windsor.
Van Horne, T. C., Pittsburg.
Watson, S. S., Moosic.
Waters, D. C., Arnot.
Wickham, J. J., Rochester.
Zieg, John, Pittsburg.
Zulick, Thos. C., Easton.

PHILIPPINE ISLANDS.

Heiser, V. G., Manila.

RHODE ISLAND.

Blumer, G. A., Providence.
Fisher, P. E., Providence.
Peters, J. M., Providence.

SOUTH CAROLINA.

Bigger, I. A., Clover.
Browning, A. W., Elloree.
Cornell, W. P., Charleston.
Mitchell, J. C., Charleston.
Rutledge, Edward, Charleston.
Egleston, W., Hartsville.
Earle, J. B., Greenville.
Fike, A. R., Spartanburg.
Lindsay, S., Winnsboro.
Wideman, S. A., Woodruff.

SOUTH DAKOTA.

Ball, W. R., Mitchell.
Klaveness, E., Brookings.
Menser, E., Bridgewater.

TENNESSEE.

Ham, E. C., Memphis.
Simpson, Jas. A., Glen Mary.
Waters, A. C., Bodenham.

TEXAS.

Baird, Jas. C., Big Springs.
Brown, W. L., El Paso.
Balde-Sarelli, P., San Antonio.
Jameson, W. G., Palestine.
Lay, J. E., Hallettsville.
White, Jas. C., Paris.

UTAH.

Osgood, C. F., Morgan.
Robison, J. C., Fillmore.

VERMONT.

Johnson, R. T., Concord.
Nay, W. S., Underhill.
Perkins, H. B., Groton.
Phelps, F. C., Vergenner, Vt.

VIRGINIA.

Hirschler, D. L., Norfolk.
Kellam, C. D., Norfolk.
Jones, W. R., Richmond.
Ayler, J. W., Newport News.
Caldwell, B. R., New Castle.

WASHINGTON.

Bentley, Frederick, Seattle.
Bumgarner, C. S., Thornton.
Booth, J. R., Seattle.
Bailey, J. W., Seattle.
Bridgford, W. L., Olympia.
Chapman, W., Spokane.
Carpenter, D. N., Puget Sound.
Curran, T. B., Tacoma.
Cook, A. B., Colville.
Coleman, J. T., Chehalis.
Dumon, J. H., Centralia.
Dow, Geo. H., Chehalis, Wash.
Gove, R. A., Tacoma.
Heg, E. E., Seattle.
Hicks, G. S., Tacoma.
Hill, F. R., Tacoma.
Kinnear, C. H., Tacoma.
Knickern, E. L., Centralia.
Libby, G. A., Tacoma.
Libby, G. W., Spokane.
Loughary, J. B., Seattle.
McDowell, G. K., Spokane.
McKone, Jas., Tacoma.
McCulloch, Geo. B., Seattle.
Miles, W. T., Seattle.
McGreery, W. B., Tacoma.
O'Rourke, Wm. P., Georgetown.
Phillips, F. A., Seattle.
Perkins, L. M., Tacoma.
Perry, R. W., Seattle.
Primmer, T., Centralia.
Pearson, M. L., Aberdeen.
Pomeroy, F. A., Cheney.
Rose, Frank, Spokane.
Russell, C. H., Pullman.
Snow, A. G., Seattle.
Stevens, J. E., Seattle.
Stewart, S. J., Seattle.
Stewart, A. C., Tacoma.
Trommald, E. A., Tacoma.
Turner, W. K., Seattle.
Thomson, R. L., Spokane.
Van Winkle, J. O., Oakville.
Weichbrod, I. A., Tacoma.
Walston, John S., Montesano.
Wagner, G. C., Tacoma.

WEST VIRGINIA.

Brounfield, G. H., Scottdale.

WISCONSIN.

Ackley, S. B., Oshkosh.
Andrews, E. P., Portage.
Bowman, F. F., Madison.
Blachly, Hayward.
Foster, A. M., Kaukanna.
Fleek, J. L., Brodhead.
Fetter, E., Plymouth.
Folsom, Wm. H., Markesan.
Hoermann, R. B., Watertown.
Ketterer, E. A., Montfort.
Lewis, S. M., Kenosha.
Monroe, W. H., Merrill.
Mann, H. E., Marinette.
McDougall, G. T., Fond-du-lac.
Noyes, G. B., Oshkosh.
Swarthout, E. C., La Crosse.
Smith, S. M. B., Crandon.

WYOMING.

Hawk, J. W., Green River.

## Marriages

W. W. CONGER, M.D., to Miss Helen Brigham, both of Toledo, June 28.

J. P. GARDINER, M. D., to Miss Antionette Sprague, both of Toledo, June 28.

CHARLES W. CRANE, M.D., to Miss Annie Reab, both of Augusta, Ga., June 28.

WILLIAM P. HARBIN, M.D., to Miss Edith Lester, both of Rome, Ga., June 28.

GEORGE H. WILLIS, M. D., to Miss Ethel B. Fahr, both of Winslow, Ill., June 14.

SAMUEL C. GURNEY, M.D., to Miss Marie H. Poillon, both of Detroit, Mich., June 28.

LOGAN M. DICKSON, M.D., to Miss Leila F. Sherman, both of Revere, Mo., June 28.

FRANCIS J. KIRBY, M.D., Baltimore, to Mrs. Teresa J. Werts, of Washington, June 27.

JAMES S. BILLINGSLEA, M.D., to Miss Katherine E. Bell, both of Baltimore, June 26.

ELLIS DUNCAN, M.D., to Mrs. Anna Kinnaird Strother, both of Louisville, Ky., June 29.

CHARLES MCCAW WOOD, M.D., to Miss Mary Stroud Swan, both of Maroa, Ill., June 28.

RICHARD W. FOLLIS, M.D., Baltimore, to Miss Louise Riggs, at Washington, June 27.

ORVILLE M. CLAY, M.D., Denver, Colo., to Miss Elizabeth Wise of Boulder, Colo., June 28.

WILLIAM HUFF BALDWIN, M.D., to Miss Theodoci Rogers, both of Memphis, Tenn., June 28.

GLEN DEAN GALLUP, M.D., River Falls, Wis., to Miss Frances Crippen of Roberts, Wis., June 21.

GORDON CHASON, M.D., Bainbridge, Ga., to Miss Mary Estell Kornegay of Newberne, N. C., June 27.

FRANK BANGHART WALKER, M.D., to Miss Kate Huntington Jacobs, both of Detroit, Mich., June 26.

H. WALTON WOOD, M.D., Taunton, Miss., to Miss Grace Elizabeth White, at Baltimore, June 28.

ARLINGTON CECIL JONES, M.D., Covington, Va., to Miss Anne Shanahan of Tuckahoe, W. Va., June 28.

JOHN FRANCIS STEIN, M.D., Oshkosh, Wis., to Miss Lilian Julia Groth of Milwaukee, Wis., June 14.

CHARLES H. BARKSDALE, M.D., to Miss Pattie Elizabeth Edmunds, both of Petersburg, Va., June 28.

ARTHUR D. HIRSCHFELDER, M.D., San Francisco, to Miss Mary Strous, at Washington, D. C., June 26.

LESTER WILLIAM BELLOWS, M.D., Waterloo, N. Y., to Miss Josephine Duff of Seneca Falls, N. Y., June 21.

ALBERT EARLE BOOZER, M.D., Columbus, S. C., to Miss Grace Bland Walter, at Winchester, Va., June 28.

CHARLES JAMES WALLACE, M.D., Chippewa Falls, Wis., to Miss Renna Lee Keith of Minneapolis, Minn., June 7.

EDWARD HALL RICHARDSON, M.D., Farmville, Va., to Miss Emily Gould, at Mt. Washington, Baltimore County, Md., June 27.

SARAH EDITH IVES, M.D., Middletown, Conn., and Rev. James J. Cogan, rector of St. Luke's Church, Fall River, Mass., June 28.

## Deaths

**Benjamin J. Day, M.D.** Pennsylvania Medical College, Philadelphia, 1856, said to have been the oldest practitioner in southern Indiana; for many years professor of surgical pathology in Evansville Medical College, died at the Evansville Sanitarium June 29, after an illness of a year, from senile debility, aged 83. At a special meeting of the Vanderburg County Medical Society June 30 resolutions of sympathy and condolence were adopted.

**Walter Bryan, M.D.** New York University, New York City, 1900, professor of physiology and toxicology and assistant professor of materia medica and pharmacology in the Brooklyn College of Pharmacy, was found dead in his apartments in New York City June 26, from heart disease, aged 38.

**Stephen G. Hubbard, M.D.** Dartmouth Medical School, Hanover, N. H., 1848, formerly a member of the faculty of Yale Medical School, New Haven, and secretary of the American Medical Association in 1859-1860, died at his home in New Haven June 30, from senile debility, aged 88.

**Ubert Lee Holford, M.D.** Rush Medical College, Chicago, 1892, for seven years a member of the village board of Cassville, Wis., and for the last two years its president, died at his home in Cassville from tuberculosis June 13, after an illness of a year, aged 33.

**Hiram R. Fish, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1870, postmaster at Gravois Mills, Mo., for many years, died at his home in that place June 19, after an invalidism of several years, aged 71.

**Robert S. Briscoe, M.D.** St. Louis Medical College, 1857, a pioneer of Colorado City, Colo.; for many years city physician of El Paso County, died at St. Francis' Hospital, Colorado Springs, June 25, after a short illness, aged 71.

**Joseph A. McKenzie, M.D.** Kentucky School of Medicine, Louisville, 1879, died at his home in Eldorado, Kan., June 25, five days after an accident in which he was thrown out of an automobile and seriously injured, aged 65.

**William Leavitt Jackson, M.D.** Harvard University Medical School, Boston, Mass., 1896, of Roxbury, Boston, died at Bad Nauheim, Germany, June 22, after an illness of ten years, aged 52.

**Franklin B. Nice, M.D.** Jefferson Medical College, Philadelphia, 1851, died at his home in Hamburg, Pa., June 29, from cerebral hemorrhage, after an illness of four months, aged 75.

**William Comerford, M.D.** Rush Medical College, Chicago, 1890, died at his father's house in Appleton, Wis., June 27, after ten years of ill health, from hemorrhage of the stomach.

**John F. Gilluly, M.D.** University of Georgetown Medical Department, Washington, D. C., 1903, died at his home in Central Falls, R. I., June 21, after a long illness, aged 26.

**Charles H. Hitchcock, M.D.** Cincinnati, 1857, for many years a prominent practitioner of Aurora, Ill., died at his home in that city June 28, after an extended illness, aged 74.

**Isaac J. Hopper, M.D.** Cincinnati, Ohio, 1885, died from tuberculosis at his home in Blue River Township, Crawford County, Ind., June 25, after a long illness, aged 45.

**Samuel P. Donnahoo, M.D.** University of Louisville Medical Department, 1892, died at his home in Jefferson City, Tenn., June 20, after an illness of four weeks, aged 33.

**Franklin B. Mainor, M.D.** Vanderbilt University Medical Department, Nashvile, 1880, was shot and killed in a street duel with E. E. Griffin at Itasca, Texas, June 26.

**Roger Q. Drake, M.D.** Jefferson Medical College, Philadelphia, 1868, died at his home in Mount Sterling, Ky., June 29, after an illness of more than a year, aged 59.

**J. H. Alexander, M.D.** University of Louisville Medical Department, 1872, of Elizabethton, Tenn., died at Johns Hopkins Hospital, Baltimore, June 24.

**William McBryar, M.D.** New York University, New York City, 1853, died suddenly at his home in Apollo, Pa., June 25, from heart disease, aged 84.

**Wesley Roberts Miller, M.D.** Columbus (Ohio) Medical College, 1876, died at his home in Detroit, Mich., June 21, after a long invalidism, aged 75.

**Eugene B. Perry, M.D.** Rush Medical College, Chicago, 1880, died at his home in Melvin, Ill., June 22, from uremia, after a short illness, aged 61.

**Willis A. Hammond, M.D.** Columbus (Ohio) Medical College, 1881, died at his home in Madison, N. Y., June 21, after a long illness, aged 52.

**James M. Kelly, M.D.** Cincinnati College of Medicine and Surgery, 1849, died at his home in Steubenville, Ohio, June 23, aged 79.

**Maurice M. Hampton, M.D.** Ohio, 1876, died at his home in Sanford, Fla., June 16, after an illness of several weeks.

**James F. Gary, M.D.** St. Louis, 1878, died at his home in Delhi, Ill., June 19, after a lingering illness, aged 55.

**Selina H. Miller, M.D.** Missouri, 1886, died at her home in Lincoln, Ill., June 22, aged 73.

## Book Notices

MANUAL OF SERUM DIAGNOSIS. By Dr. O Rostoski, University of Wurzburg. Authorized Translation by Charles Bolduan. First Edition. First Thousand. Cloth. Pp. 86. New York: John Wiley & Sons. London: Chapman and Hall Ltd. 1904.

Rostoski uses the term "serum diagnosis" in its literal sense, including not only the phenomenon of agglutination for the identification of bacteria and for the recognition of disease, but also the action of the bacterial precipitins of Kraus, and the use of serum-precipitins and hemolysins as forensic blood tests. In harmony with the evident intention, however, of producing a manual which satisfies a need of practitioners, the author treats chiefly of the agglutination reaction as a means of recognizing the more common infections. Eleven pages of "general considerations" are devoted to a brief and clear description of the different kinds of antibodies which may be formed. The value and the application of the agglutination test in typhoid and paratyphoid occupy about one-half the book. Such subjects as the date of appearance of the reaction, the reaction in conditions other than typhoid, failure of the reaction, group agglutination, and tests as performed with killed micro-organisms are discussed with a clearness which is gratifying. The ease with which the practitioner in his own office may perform the agglutination test with formalin cultures or with some such preparation as Ficker's diagnostic, is illustrated. This feature is introduced by the translator who also inserts paragraphs on paratyphoid and paradysentery. Chapter III discusses agglutination in tuberculosis and Chapter IV "Agglutination in Other Diseases," as plague, cholera, dysentery, glanders and infections with the pyogenic cocci. Chapters V and VI treat of serum reactions which have a forensic value. An appendix includes several drawings from Wilson showing the microscopic appearances of a glutinated bacteria and illustrating some sources of error.

AN ATLAS OF DERMATOLOGY, Showing the Appearances, Clinical and microscopical, Normal and Abnormal, of Conditions of the Skin. By M. Dockrell, M.A., M.D. Cloth. Pp. 264. Price, $17.00 net. New York: Longman's Green & Co. 1905.

This atlas is a new departure in that each case which is illustrated has below it a microscopic drawing showing the histologic findings. This plan of illustration is worthy of unqualified recommendation. We have seen no atlas which is so instructive as this because of this feature, and it is hard to imagine a method of illustrating cutaneous diseases which is more interesting or more instructive. The atlas contains forty plates, most of them illustrating the more familiar dermatoses; there are in addition several plates of rare conditions. The numerous illustrations of the commoner dermatoses make the atlas of great value to the general practitioner. It should also appeal strongly to the expert on account of the combination of histologic and clinical pictures and the excellent judgment used in the selection of cases for illustration. The text is confined, as it should be, to a description of the microscopic section and of the lesion from which it is taken. The work is an excellent example of book making. It is printed on highly glazed, thick paper, which gives the best effect to the illustrations. The coloring of the illustrations is fair; it is not as good as that of a few of the most recent French and German atlases, but it does not fail in this particularly; the coloring is not confined to a pink background to represent normal skin with casual dabs of color in spots to represent lesions. It is sufficiently well done to represent lesions with accuracy. On the whole, the work can be highly commended. It is to be hoped that it will have a large sale, so that its success may induce the production of other atlases on the same plan.

A TREATISE ON THE DIAGNOSIS OF DISEASES OF WOMEN. For Students and Practitioners. By Palmer Findley, B.S., M.D., Assistant Professor of Obstetrics and Gynecology, Rush Medical College in affiliation with the University of Chicago. 588 pages, 281 illustrations, 59 of them in Colors. Cloth. Price, $4.75 net. Lea Brothers & Co. Philadelphia. 1905.

The present—second—edition contains a number of new paragraphs and several new chapters. A chapter on the relation of the pathology of the blood to gynecologic diagnosis and another on the bacteriology of the female genital tract give clear ideas of these important subjects. A number of new plates and engravings have also been added, and some of the cuts of less useful instruments omitted. The paragraphs on "Cystic Disease of the Ovary" have been rewritten, the theory of the etiology of this disease introduced and the recent literature carefully reviewed. Valuable additions to the chapter on the urinary organs have been made. Exfoliative endometritis and abscess of the uterus, both omitted in the first edition, have been taken up here. This is an extremely practical book, and a very valuable one for the student and practitioner.

A MANUAL OF ACUTE POISONING, Giving Classification, Varieties, and Individual Substances usually met with in Emergency Poisoning, etc. Together with methods for use in First Aid to the Injured, by J. W. Wainwright, M.D. Cloth. Pp. 96. Price, $0.75, net. New York: E. R. Pelton, 1905.

This book contains a brief outline of the symptoms, tests and treatment of acute poisoning from various substances. It makes a convenient ready-reference book for these emergency cases.

## Miscellany

### THE ETHICS OF CONSULTATION.

**B. D. Bosworth, M.D.**

KNOXVILLE, TENN.

Consultation is the rose in our flower-garden; it is the milk in our cocoanut; it is the cream on our milk. To be a worthy and popular consultant is the loftiest of all our ambitions, the most exalted of all our attainments and the richest in its results and rewards. To be an able consultant is to be "greater than a king." And yet it is the tendency of this age rather to discourage consultation; and many are the so-called independents, who, attaching some fledgling just from the nest as anesthetist and assistant, and equipping themselves with a few thousand yards of "red tape," deem themselves amply sufficient for all the mighty problems of life and death.

Many are the egotists who have become so thoroughly imbued with a sense of their own importance and so profoundly in love with their own opinions that the bare suggestion of a consultant is an insult. Many are the small-souled, jealous, envious, narrow-minded men among us who advise against consultations solely because their hearts contract and shrivel at the thought of another man receiving the justly increased honorarium. Others there are (and alas! their name is legion) who grope always in "the darkness of ignorance," and who everlastingly oppose consultation because they fear or, perhaps, can not bear to have the light turned on.

These and many other pernicious influences are at work to destroy this proudest of our tenets and ordinances. So that, first of all, I wish to enter a protest against them and a plea on behalf of both patient and physician for a wider and more generous view in reference to a matter of such vital import.

What poor, sick, suffering mortal ever existed but was refreshed and buoyed up and filled with renewed hope and good cheer by the opportune introduction of the new mind, brought to bear on his case, if only to assure him all was well? What honest and conscientious physician or surgeon can deny that some of the proudest moments of his career have come to him when, in the confidence of the consulting room, some able and distinguished confrère assures him that his work is approved and his duty well performed? Or where is the faithful practitioner, who, when long and continued effort on a given case has been unattended with success, will not gladly and with a heart free from guile take off his hat to the consultant, who puts him on the right track and places within his hands the material from which a cure is wrought? Did there ever live the obstetrician, worn by prolonged and assiduous attendance

on protracted labor—or did there ever breathe the agonized parturient, fagged and forlorn from the pangs and suspense of inertia, but were both filled with new hope and new energy when the strong, fresh, wholesome presence of the honored consultant enters the room to give without stint from his cooler head and to lend without limit his steadier hand and nerve?

The mind must indeed be narrow and the soul infinitesimal that can fail in the full appreciation of such splendid help so modestly and so generously given. Aside from the benefits that accrue to the patient and to his attending physician out of consultation, there remains this other potent reason why it should be encouraged in every honorable way: The majority of us have swooped down on this community, red-handed from the dissecting room, and flung out to these soft southern breezes a banner (in the shape of the sign Dr. So and So), on whose magic folds is written the hidden inscription: "We own the earth;" unmindful of the fact that we are poachers on the preserves of other and perhaps better men; never for one instant admitting to ourselves that our patients and our incomes can only be derived from patrons we must beguile from the clientele of men grown gray in their service as family physicians. It becomes us, therefore, to treat these gentlemen kindly and to make them whatever reparation we can by calling them in consultation as often as possible and gladly helping them to secure the larger fee in return for their aid in saving the lives of men, women and children, whom they know so well; not waiting either until the patient be moribund, but let them share our triumphs as well as our responsibilities.

The question, "with whom shall we consult?" is to-day perhaps a more complex one than it has ever been in all the history of ethics, because the American Medical Association has in recent session thrown down the bars to those who have been homeopaths, eclectics, etc. There are reputable schools in which they should have been educated and can be still, and this action is as yet too young to be judged by its fruits; but I am greatly troubled over the prospect, for I love that clause in the time-honored Code (now the Principles of Ethics), which warns us against association with any man whose practice is based on an exclusive dogma; and I believe that much of the dignity of the regular profession has had its origin in its contempt for quackery.

I believe in exclusive consultation—an exclusiveness that will shut out the moral leper, the notably unworthy, the palpable imposter and that will forever bar the criminal abortionist. And I thank God that there is no law to prevent the exercise of individual judgment and discretion as to whether or not we shall meet Dr. Scoundrel in these sacred relations. Be an upright regular yourself, first, last and always, and see to it that you associate only with upright regulars.

But let us leave these painful thoughts and study—what I hope will appear to be—an ethical consultation between Dr. A, the attending or family physician, and Dr. B, the consultant. Dr. A has become dissatisfied with the condition of Mr. Smith and has asked for a consultation (and he feels all the better for having taken the initiative in the matter, rather than having waited until Mr. Smith or the family have awakened him with the bombshell that they would like a consensus of opinion).

In the choice of the consultants Mr. Smith and family should be allowed an unbiased selection, and when Dr. B has been agreed on, it is Dr. A's duty to call him up and ask for an appointment at as early a moment as the case requires and is convenient for him. The hour being set, the next point is punctuality; it is poor taste and bad form for either to keep the other waiting, and when this does occur unavoidably the amend honorable is always in order.

From the moment Dr. B enters the house he becomes Dr. A's welcome guest and is entitled to every possible courtesy and civility. Dr. A meets him at the door when practicable and extending to him the welcoming hand, leads him cordially into a private room and unfolds to him the nature of the malady and a full history of the case, emphasizing whatever features have seemed at all obscure.

Following this preliminary conference they repair at once to the sick room, where Dr. A quietly introduces any strangers who may be present, the nurse and the patient, and when, without any show of hurry, greetings have been exchanged and pleasantries passed, Dr. B is offered a comfortable chair near the fire or window and Dr. A takes his place at the bedside and carefully observes the patient's pulse and tongue and temperature, and further seeks for any possible change or hitherto unnoted circumstance. Having satisfied himself thoroughly, he passes the thermometer over to Dr. B and courteously invites him to proceed with his examination of the patient.

In conducting this examination Dr. B must in turn prove himself a gentleman (and there is no better opportunity for acting the dog than is presented right here, if he happens to be built that way). He must keep in mind that the attending physician is perhaps being weighed in the balance, and he must have great care to take no unfair advantage. I have known shrewd, villainous doctors to dash into this examination with an eye single to their own brilliancy and advancement, and to carry themselves throughout with a display and bombast which soon makes the attending physician feel and look like the far-famed "thirty cents." Ethics is opposed to everything like this. There must be no play to the grandstand. There must be no assumption of superiority, no display of red tape, no indulgence in extraordinary attentions or assiduities. There must be strict avoidance of anything which might humiliate your brother.

To illustrate this point: There were several of us, some years ago, engaged in searching for pus in a suspected pleural sac, and, after several days' fruitless endeavor and sundry plunges of the aspirating needles, it was determined to seek aid from "the noblest Roman of them all" (you will recognize him from a recital of the incident), and his first plunge filled the syringe with pus. He quickly covered it up so that neither patient nor bystander knew of his success, and when we next saw that syringe 'twas behind the closed doors of the consultation room. Here is the essence of ethics. On another occasion, when pressed by an eager, anxious sister of the patient for answer to important questions, I heard him reply with great dignity: "Your family physician is my mouthpiece I must refer you to him."

It is so easy to act the gentleman and so beautiful to all concerned. We can always maintain a scrupulous regard for the character and standing of the family physician and still not sacrifice the patient.

When Dr. B has completed his examination he signifies it by a nod to Dr. A and with an encouraging goodbye to the patient and others, a graceful exit is accomplished and they retire to the consultation room and shut the doors. Dr. A again states his case, his diagnosis and treatment and accords Dr. B the floor, at the same time taking out notebook and pencil. Dr. B proceeds modestly to deliver a short lecture, covering the case briefly yet fully, praising where he can, agreeing where possible, giving freely all he knows on the subject, keeping the patient's welfare uppermost, suggesting a line of procedure and treatment which in his judgment will yield the best results, and winding up by saying: "Now, my dear Dr. A, there's all I know about it. You have my ideas and suggestions; if you see fit to apply them or if you can find in any of them the help you seek, I shall be most happy." Dr. A thanks him cordially, adding the words of praise that are always so grateful and promising to keep him posted, bows him out with politeness. Returning at once to the bedside, he does Dr. B the justice to execute as many of his suggestions as will satisfy his conscience and his God, giving him a full measure of credit and fairness.

In the event that their conference fails in an agreement and the point of difference be one of special moment, they must ask the family for another consultant, and they must agree on a man whom both can trust with the burden of a decision. Or still others are often called in desperate straits—and the greater the number the greater the need for form and ceremony; and each new consultant is another honored guest of the attending physician. In rendering opinions, each is called on in their order of coming.

At this point I must enter a plea for conciseness and brev-

ity. For the patient's sake first, because he is the one most concerned, and if your deliberations are prolonged unreasonably he will become uneasy and restless and alarmed. For the family's sake next, because they are, perhaps, awaiting your decision with breathless anxiety, and I have often found both patient and family worked up to the highest pitch of panic and excitement after protracted conference. Lastly, be brief for the sake of each other, for we are all supposed to be busy men, and any other view is an indignity. Other patients have their claims, and keeping these points in mind, it will be easy for each man to do justice to the case in hand without indulgence in matters entirely foreign. The consulting room is not the place for idle persiflage or boresome yarn-spinning and theoretical discussions should likewise be eliminated.

When a consultation is concluded and its results begin to tell, it sometimes occurs to the family and the patient that they would like that consultant to have full charge of the case—and I have known consultants to take full charge of the case and let the attending physician find out about it as best he may—this to the everlasting shame and disgrace of these consultants. The awkwardness of such a demand on the part of family or patient can only be met in one honorable way, and that is for the consultant to state to them firmly and positively that they can only have his help in connection with the attending physician.

Unless importuned by the family physician himself, offering abundant and sufficient reasons, no reputable physician is ever justified in assuming control of a case in which he has once served as a consultant. The attitude of associate counsel is always available—the retained physician and the family physician can always work together; and consideration for the patient's purse must never take precedence over a confrère's feelings. To solicit a consultation is as contemptible as to solicit a patient. No gentleman will ever be guilty of either of these grave offenses. "All discussions in consultation should be held as confidential. Neither by word nor by manner should any of the participants in a consultation assert or intimate that any part of the treatment pursued did not receive his assent." So reads verbatim Section 9 of Article III of the Principles of Medical Ethics of the American Medical Association—alas that so few of us should recognize it!

In my twenty years of study of questions ethical I have found the almost invariable excuse for flagrant violation of our Principles of Ethics to be ignorance. Ignorance is not admitted in our courts of justice—even in extenuation of the offenses of men who never professed intellectuality. Much less then should it ever be admitted to exonerate members of a learned profession.

If we be ignorant of these principles, then let us take a few days off and master them, and then make faithful endeavor to live up to them, or else take down our signs and return to the hoe and the plow. "There is no darkness but ignorance." Thus the immortal bard of Avon sounded the keynote of all civilization.

"It is a common sentence that knowledge is power! but who hath duly considered or set forth the power of Ignorance? Knowledge slowly builds up what Ignorance in an hour pulls down.

"Knowledge, through patient and frugal centuries, enlarges discovery and makes record of it: Ignorance, wanting its day's dinner, lights a fire with the record, and gives a flavor to its roast with the burned souls of many generations.

"Knowledge, instructing the sense, refining and multiplying needs, transforms it into skill and makes life various with a new six day's work: come Ignorance drunk, on the seventh, with a firkin of oil and easy 'Let there not be'—and the many colored creation is shriveled up in blackness. Of a truth Knowledge is power, but it is a power reined by scruple, having a conscience of what must and what may be; whereas, Ignorance is a blind giant, who, let him but wax unbound, would make it a sport to seize the pillars that hold up the long wrought fabric of human good, and turn all the places of joy dark as a buried Babylon!"

## MEDICAL PRACTICE IN PERSIA.

MIRZA SINORE MUZAFFAR RAFFIE.

KASHAN, PERSIA.

The physicians in Persia can conveniently be divided into three classes, namely, those who practice according to the old school exclusively, those who practice according to both the modern and the old schools, and those who practice according to the modern school exclusively.

Those who practice according to the old school may be again subdivided into two classes; those who can read and write, and those who can neither read nor write. The former are usually successful in the educated or partially educated communities. They have just about enough knowledge of their native tongue and also of Arabic to be able to read the medical text-books, written in both Persian and Arabic, and to follow very closely the directions and suggestions given in such books. They by no means prescribe drugs for their patients; for, aside from being totally ignorant of the application of drugs, they have a strong superstition that the use of such medicine is very harmful.

Those physicians of this class who can neither read nor write, however, are mostly "fakes" and "quacks," who, for some reason or other, have left the profession or business in which they were formerly engaged (for most of this class of physicians are those who take up the profession when they have failed in every other profession or enterprise), and have taken up the medical profession without knowing the first thing about the science of medicine. As there are no medical laws in Persia, these so-called "quacks" find a good chance to carry their own wishes through without there being anybody to suppress them. Fortunately, however, there are not very many of them to be found in cities, for they usually prefer the villages and small towns, and travel from place to place the year round.

Those who practice according to both the modern and the old schools are, as a rule, cultured Persians, who have a thorough knowledge of medicine according to Abu-Seena and Sadudie of the old Oriental school of medicine. In addition to this, they have a pretty fair knowledge of chemistry, of drugs, of physiology, and of anatomy, according to the modern school. They are, as a rule, intensely interested in the modern science of medical practice, and heartily welcome any knowledge or information from that source that they may be able to obtain. Physicians of this class are generally successful, because with this knowledge they are able to satisfy nearly all classes in the community in which they reside, with respect to medical practice. For instance, as the people of Persia are accustomed to the use of herbs as medicine, some of them are very superstitious as to the use of drugs. There are, on the other hand, others, mostly educated people, who prefer drugs and do not use herbs. Now, these physicians are so situated that they can satisfy both classes, a thing which naturally makes them very successful.

Those who practice according to the modern school exclusively are, for the most part, native doctors who have received their medical training in either France, England, Germany, Belgium, or Russia. A number of native students are being sent to foreign countries by the government every year, while there are other young men who go independently. Besides the native doctors, there are several European physicians who practice in the large cities, like Ispaham, Teheran, Tabriz, and Hammadan. Some of these are Christian missionaries who usually stay one in each city and give free medical aid to the poor.

For physicians of the last class there seems to be a great demand. Of late they have been greatly encouraged by the government in every possible way, so much so, in fact, that now most of the young men who graduate from the Royal Polytechnic College, or the "Dar-al-Funun," at Teheran, choose medicine as their profession. After studying in the college of medicine of the Royal Polytechnic for a few years, they go to Europe to finish their studies. I imagine that in no other country is there such a great field for the young medical practitioner as in Persia. Aside from the fact that he is well received and has as good a practice as he may desire, the physician of this class is looked on as a very distinguished person. The old system is gradually but surely losing its hold on the people of Persia, and the modern system is taking its place very rapidly. The ignorant class of physicians is being ignored more and more, while those who have had a modern medical education will find the government and the people ready and willing to encourage and aid them in every way.

**Medical Men Deserving of Fame.**—Among the great men who have influenced American life for good and who have advanced the cause of civilization, says *American Medicine*, there can be no doubt with the considerate that medicine has furnished as many as any other calling or profession.

**Force Expended in Propelling a Bicycle.**—Zuntz and others have been studying this subject by towing, with an automobile, a bicycle and its rider, with a dynamometer interposed on the tow-line. Among the points learned is that only about 28 per cent. of the total force expended in riding a bicycle is used in propelling it. Their report is published in the *Archiv. f. Physiologie*, 1904, supplement, summarized in the *Munch. med. Wochft.*, No. 22.

**Pernicious Malaria.**—C. M. Garcia of Vera Cruz reported at the recent first national medical congress at Havana a case diagnosed as pernicious malaria in a 9 months babe. The symptoms suggested meningitis or apoplexy and had developed suddenly. Respiration was rapid and superficial, but regular, and there were no convulsions, but there was total unconsciousness and insensibility, slightly subnormal temperature and filiform pulse of about 130. He injected 1 gm. (15 grains) of quinin dihydrochlorid subcutaneously, with two liters of hot physiologic salt solution, by the rectum. The child was further packed with cloths wrung out of hot water, with cold water to the head. Improvement was observed in a few minutes and recovery was complete in a few days.

**Sleeping Sickness and Thyroid Treatment.**—The *Berliner klin. Wochft.* for May 29 quotes Lorand of Carlsbad, calling attention to the many points of resemblance between sleeping sickness and myxedema. Both occur after a preceding infectious disease, and both exhibit symptoms indicating inadequate thyroid functioning. In sleeping sickness they are evidently the expression of pathologic changes in the thyroid gland resulting from the preceding trypanosomiasis, and, like those of myxedema, they may not become manifest until years afterward. His success with thyroid treatment in the case of an army officer returned from the Congo confirmed his assumption that sleeping sickness is due to defective thyroid function. With excessive functioning there is insomnia, but when the thyroid is insufficient the tendency is to drowsiness. The serum of thyroidectomized animals has a direct sleep-inducing action.

**Standard of Robustness.**—A French army surgeon named Pignet determines the comparative general health and resisting capacity by the relations between the height, chest measure and weight. The sum of the chest measure in centimeters added to the weight in kilograms is subtracted from the height in centimeters. For instance, a man 169 centimeters tall, with a chest measure of 73 centimeters and weighing 83 kilograms, would have a coefficient of robustness equivalent to $169 - (73 + 82) = 14$. The smaller the figure the more vigorous the constitution. When the subtrahend is from 10 to 20 the condition may be regarded as extremely vigorous to fair; from 21 to 25, moderate; from 26 to 30 as weak; from 31 to 35 as very weak, and over 35 as indicating an extremely weak constitution. The chest measure is taken along the upper margin of the pectoralis major during the pause in respiration, the arms relaxed and pendent. The application of this standard to recruits and in life insurance examinations has afforded very valuable information at times.

**How a Cholera Epidemic Was Started.**—Major Sykes, British consul at Kerman, Persia, in a letter to the London *Lancet*, gives an interesting account of the origin of an epidemic of cholera. A pilgrim returned from Meshed and died from cholera a few miles out of Kerman. His body was washed in running water (a Mohammedan custom) and his clothes were sent into Kerman and sold, thus starting the epidemic. The entire Persian official community ran away, followed by every one who could procure a mount, and as a result the villages were immediately affected. Business was at an utter standstill, and the only bright side, Major Sykes states, was the heroic labors of the medical men of the Church Missionary Society who fought the epidemic single-handed. Fortunately, the cold weather was near, and by the end of December, after having run its course for about two months, with a loss of life aggregating perhaps 500, the epidemic ceased. Two salient points were brought out—viz., the necessity of providing properly trained Persian physicians and the equal necessity of training the people to obey a few simple regulations for the preservation of their health.

**New Way of Protecting Against X-Ray Injury.**—J. Bergonié presented a communication to the Paris *Académie des Sciences*, at the meeting of June 5, in which he described his method of protecting the operator and aids against injury in *x*-ray work. The ordinary protective measures modify the electric field or incommode the movements of the operator. These drawbacks can be avoided and perfect protection be accorded by keeping the operator above the plane corresponding to the extension of the anti-cathode, while the patient is below this plane. The space is in reality divided into two strata, the upper one being entirely free from the action of the *x*-rays. Sensitized plates can even be handled openly in the upper stratum without feeling the effects of the rays. The method is not applicable to radioscopy, but for radiography or radiotherapy, it has proved very satisfactory in six months' experience. All that is necessary is to have the plane of the bed or table on which the patient lies very low, scarcely raised at all above the floor.

**Mechanism of Digestion in Stomach.**—P. Grützner has an article on this subject in the last volume of *Pflüger's Archiv.*, cvi, page 463, epitomized in the *Münch. med. Wochft.*, No. 22. Frogs and crabs, rats, guinea-pigs, rabbits and dogs were fed with variously stained food, the different portions being stained different colors. A few hours afterward the stomach was taken out whole, frozen and then cut in sections. The variously colored portions of the food were not mixed together, but were found in sharply defined strata, the portion last taken being in the center of the stomach content. This allows the digestion of starch to continue, as there has been no contact with the secretions of the gastric wall. The central portion does not feel the influence of these secretions until the portions below it have been mixed with gastric juice and evacuated. Ingested fluid is rapidly passed along through the lesser curvature and out of the stomach. These facts deserve consideration in examining portions of stomach content obtained with the stomach tube.

**New Journals.**—*Surgery, Gynecology and Obstetrics* is a new international monthly magazine, edited by Drs. Franklin H. Martin and Allen B. Kanavel, Chicago. The list of men on the editorial staff and among the collaborators leaves nothing to be desired as far as standing is concerned. The first issue is well illustrated, contains several interesting articles, many well-selected abstracts and representative society reports. The editors in their salutatory recognize the fact that they are entering a field of medical journalism in which there are already many creditable journals, and take the radical stand that not one of the members of the editorial staff "will be satisfied if the journal does not take immediately a prominent place in the world of medical journalism and ultimately a leading position. They each realize that there is no call for another ordinary surgical journal, and that if they do not succeed in making this a journal far beyond the ordinary, there is no reason for its existence." It is gratifying to have the assurance that another mediocre journal is not intended, and we wish the new journal success. Its first number presents an excellent appearance in style and arrangement. The magazine ought to succeed. We regret to see in the advertising pages some of the worst nostrums that are being exploited to our profession. Is it possible that the publishers can not get along without the support of nostrum mongers? ——The *Wyandotte County Medical Journal* makes its first appearance as the official organ of the Wyandotte County Medical Society, and is issued at Kansas City, Kan. It contains several original articles, some pointed brief editorials and some news matter. Its aim is a modest one, as expressed by the editors. They propose simply to supply a medical publication which they feel is needed, and announce their willingness to retire when that need ceases. The typographical appearance is very good.

# Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

### POWER OF THE COUNTY SOCIETY.

PORT RICHMOND, N. Y., June 23, 1905.

*To the Editor:* Can our local society dismiss us from the society for doing lodge or contract work? If we were dismissed from our local society what would be the effect in other societies, such as New York State Medical Association, or the American Medical Association? Has it been settled that contract lodge work or family work is non-ethical?

N. A. CHAPMAN, M.D.

ANSWER.—Each county society has the right to determine what, within its jurisdiction, constitutes or does not constitute "unprofessional conduct." Of course, then, each county society has the power to decide who may or who may not be elected or remain members. These autonomous rights, however, under the general organization, are qualified by restrictions in the interest of justice and of comprehensive organization. A physician may not be debarred from the organization except it be shown that in some respect he is unfit for association with his fellows. In determining the facts of an individual case, the physician who is refused membership or who is expelled has the right of appeal, so that mere local prejudices alone may never suffice to place on him the ban of ostracism. It is clear that a county society has the right to declare that contract or lodge practice constitutes unprofessional conduct, but its action in so doing, as well as in carrying into effect such a provision, is subject to review and adjudication by the state association of which it forms a component part. As to whether contract practice in every form is unprofessional conduct is a problem that the profession yet regards as sub-judice. In a case such as mentioned by our correspondent, the aggrieved party has a right to ask a full hearing by the state association. Dismissal from the county medical society of the county in which one lives, under the present generally adopted mode of organization, carries with it disability for membership in the state medical association and in the American Medical Association. The definition, limits, and ethics of lodge and contract practice have yet to be decided by the profession, though in most forms now existent such practice is regarded by the best professional opinion as decidedly reprehensible.

### FORMIC ACID AND THE FORMATES IN THERAPEUTICS.

ABRINGTON, VA., June 21, 1905.

*To the Editor:*—Can you tell me through your columns the results of the experiments made with formic acid, the therapeutic use of the formates or where they may be secured.

JOHN W. CRONGAN.

ANSWER.—We know little of which we can speak with authority, although we have seen many sensational reports in the newspapers, purporting to be cablegrams from Europe. Dr. Clement, of Lyons, France, called attention last year to the stimulating action of formic acid on the muscular system. The drug is an old one, and Huchard, in a later communication to the Paris Académie de Médecine, March 14, 1905, traced its history through various pharmacopeias of past centuries, and related a number of experiences in regard to what he called its remarkable tonic action on the muscular system. He asserted that persons taking it are said to feel invigorated and to be able to perform feats of endurance without fatigue, the effect being felt for even a week afterward, and fatigued muscles rapidly recuperating under its influence. Huchard claimed to have used it in various forms of debility, with good effect, as he related in detail. He said that his experiences confirmed those reported by Clement. He declared that after taking 15 gm. of sodium formate in five days the ergograph showed that his muscular force had increased from 8 kilograms, 750, to 30 kilograms, 650, almost quadrupling in less than six days. He said further that the drug has also a diuretic action, while it is not toxic. As much as 60 gm. of sodium formate were required to kill a dog of medium size. Clement has been taking the drug himself for twenty months, without ill effects. The formic acid is usually given in the form of a formate, made by saturating the acid with carbonates or oxids. Sodium formate is soluble and deliquescent. It is given in 2 or 3 gm. doses daily for a week. The dose of formic acid is about 2 gm., diluted and neutralized with 4 gm. of sodium bicarbonate. The taste is rather disagreeable, and sodium formate is preferable. The other formates are less soluble. Sodium formate is made by Merck & Co., and may be purchased from any wholesale drug house.

### NEW TECHNIC FOR CIRCUMCISION.

BIRMINGHAM, ALA., June 26, 1905.

*To the Editor:* In THE JOURNAL, June 17, 1905, p. 1949, Dr. M. E. Gardner, writing from Ancon, Canal Zone, describes a method of circumcision and asks whether or not it has been described before. What is practically the same operation was described by Dr. Walter C. Klotz, at that time, October, 1902, assistant surgeon to Roosevelt Hospital, New York City, in the *New York Medical Journal*, Vol. LXXVI., No. 14, p. 575. The operation described by Dr. Klotz, however, is a better one than that described by Dr. Gardner, for this reason: The cuff of skin is removed nearer the corona, and thus is formed of the very tissue which we are endeavoring to be rid of, viz., the constricting prepuce. It thus meets, also, the objection you cited in your reply to Dr. Gardner.

As stated, both by you and by Dr. Klotz, the operation is not adapted to children. J. M. LOWERY, M.D.

# State Boards of Registration

## COMING EXAMINATIONS.

State Medical Board of the Arkansas Medical Society, Little Rock, July 11. Secretary, J. P. Runyan, Little Rock.

Rhode Island State Board of Health, State House at Providence, commencing at 9 a. m., July 11. Secretary, G. T. Swarts, State House, Providence.

Wisconsin Board of Medical Examiners, Park Hotel, Madison, Wis., July 11. Secretary, F. A. Forsbeck, Milwaukee.

State of Connecticut Medical Examining Board, City Hall, New Haven, Conn., July 11-12. Secretary, C. A. Tuttle, New Haven.

Maine Board of Registration of Medicine, State House, Augusta, Maine, July 11-12. Secretary, Wm. J. Maybury, Saco.

Board of Registration in Medicine, State House, Boston, Mass., July 11-12. Secretary, E. B. Harvey, Boston.

Vermont State Board of Medical Registration, Y. M. C. A. Hall, Burlington, Vt., July 11-12-13. Secretary, W. Scott May, Underhill.

Kansas State Board of Medical Registration and Examiners, State House, Topeka, Kan., July 12-13. Secretary, G. F. Johnston, Lakin.

South Dakota Board of Medical Examiners, Sioux Falls, S. Dak., July 12-13. Secretary, H. E. McNutt, Aberdeen.

Board of Medical Supervisors, Washington, D. C., July 13. Secretary, Wm. C. Woodward, Health Department, Washington.

California State Board of Medical Examiners, San Francisco and Los Angeles, Cal., July 19. Secretary, C. L. Tisdale, San Francisco.

State Board of Health of West Virginia, Charleston, W. Va., July 18-20. Secretary, H. A. Barbee, Point Pleasant.

State Board of Health of Illinois, the Great Northern Hotel, Chicago, July 19-21. Secretary, J. A. Eagan, Springfield.

**Indiana May Report.**—Dr. W. T. Gott, secretary of the Indiana Board of Medical Registration and Examination, reports the written examination held at Indianapolis, May 2-4, 1905. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, equivalent to 75. The total number examined was 182, of whom 138 passed, including 30 osteopaths, and 44 failed, including 8 osteopaths. The following colleges were represented:

| College. | Year Grad. | Per Cent. |
|---|---|---|
| **PASSED.** | | |
| Medical College of Indiana | (1905) | 78.28, 82.69, 81.98, 81.1, 80, 78, 77.94, 83.41, 87.21, 84.91, 75.04, 83.59, 82.7, 75.2, 86.6, 79.35, 78.56, 84.44, 87.85, 83.09, 85.76, 80.62, 80.25, 81.6, 76.86, 89.48, 83.16, 77.46, 75.23, 79.21, 83.05, 84.94, 75.85, 86.99, 84.61, 77.16, 75.56, 78.6, 83.04, 78.61, 83.55, 87.37, 79.11, 80.93, 79.2, 78.21, 79.73, 82.57, 82.51, 85.2, 77.13, 85.5, 81.38, 75.6, 82.58, 83.19, 84.22, 85.1, 81.45, 86.35, 75.93, 80.1, 82.12, 80.76, 79.15. |
| Central College of P. & S., Indianapolis | (1905) | 70.87, 63.47, 72.3, 84.2, 76.3, 83.92, 85.84, 79.84, 79.29, 80.92, 83.48, 76.02, 86.5, 79.98, 79.93, 78.29, 86.55, 80.94, 84.15 |
| Eclectic Med. Coll. of Indiana | (1905) | 75.1 80.46 |
| Physio-Medical Coll. of Indiana | (1905) | 75.22 |
| Fort Wayne Coll. of Med. | (1905) | 75.84, 81.42, 81.93, 82.13, 77.65, 79.24, 80.57, 79.5 |
| Tulane University | (1892) | 84.17 |
| Louisville Med. Coll. | (1898) | 76.96 |
| Illinois Med. Coll. | (1905) | 83.85 |
| Eclectic Med. Inst., Cincinnati | (1905) | 75.32 |
| Kentucky School of Med. | (1904) | 77.83 |
| Univ. and Bellevue Hosp. Med. Coll. | (1903) | 86.7 |
| University of Louisville | (1905) | 79.55 |
| University of Michigan | (1904) | 85.65 |
| Rush Med. Coll. | (1900) 85.02; (1903) | 89.4 |
| College of P. & S., Chicago | (1902) 85.06; (1903) | 77.17 |
| Univ. of Michigan Homeo. Med Dept. | (1902) | 76.9 |
| Cornell University | (1904) | 86.45 |
| **FAILED.** | | |
| Medical College of Indiana | (1904) | 68.69*; (1905) 74.5, 74.07, 73.95, 60.55, 73.7, 68.67, 72.29, 65.28, 70.68, 73.88, 73.5 |
| Central College of P. & S., Indianapolis | (1905) | 70.87, 63.47, 72.3, 64.14 |
| Physio-Medical Coll. of Indiana | (1905) | 69.3, 67.43, 67.13 |
| Eclectic Med. Inst., Cincinnati | (1905) | 73.85, 69.15, 73.35; (1903) 59.48** |
| Hospital Coll. of Med., Louisville | (1904) | 47.6†, 67.09*, 66.25* |

| | | |
|---|---|---|
| Louisville Med. Coll. | (1905) | 67.5, 73.69 |
| University of Louisville | (1905) | 72.65 |
| Tennessee Med. Col. | (1899) | 65.72 |
| Columbia Univ., New York | (1900) | 72.46 |
| Illinois Med. Coll. | (1905) | 74.85 |
| University of Kentucky | (1904) | 61.5* |
| Eclectic Med. Coll. of Indiana | (1905) | 68.5 |
| Fort Wayne Coll. of Med. | (1905) | 65.33, 74.65 |

The general average attained by all representatives of the Medical College of Indiana who passed was 79.92; of the Central College of P. & S. of Indianapolis, 81.05; of Fort Wayne College of Medicine, 78.61.

* Third examination.
** Fourth examination.
† Second examination.

# The Public Service

## Army Changes.

Memorandum of changes of stations and duties of medcial officers, U. S. Army, week ending July 1, 1905.

Bratton, Thos. S., asst.-surgeon, since June 22, 1905, in temporary charge of C. S. O., Department of the Lakes, Chicago.

Heizmann, C. L., asst.-surgeon general, granted two months' leave of absence.

Girard, Jos. R., asst.-surgeon general, on arrival at San Francisco, will report to commanding officer, Army General Hospital, Presidio of San Francisco, for observation and treatment.

Darnall, Carl R., asst. surgeon, granted thirty days' leave of absence.

Gibson, Robert J., surgeon, left Fort Logan, Colo., on thirty days' leave, with permission to apply for three months' extension.

LeWald, Leon T., asst.-surgeon, leave of absence extended fourteen days.

Ford, Clyde S., asst.-surgeon, granted two months' leave of absence, to take effect July 1, 1905.

Smart, Robert, asst.-surgeon, ordered to proceed from Fort Myer, Va., to Fort Washington, Md., for temporary duty.

Jones, Percy L., asst.-surgeon, granted twenty days' leave of absence.

Ruffner, E. L., asst.-surgeon, left Columbus Barracks, Ohio, with recruits to Fort Lawton, Wash.

Jones, Percy L., asst.-surgeon, advanced to rank of captain.

Krebs, Lloyd LeRoy, asst.-surgeon, reported for temporary duty at Presidio of Monterey, Cal.

Greenleaf, H. S., asst.-surgeon, left from temporary duty at Fort Armistead, Md., on ten days' leave of absence.

Wall, Francis M., contract surgeon, returned to Fort Oglethorpe, Ga., from leave of absence.

Gardner, Fletcher, contract surgeon, recently arrived at San Francisco, from the Philippines, ordered to accompany the Twenty-third Infantry to Madison Barracks, N. Y., before availing himself of three months' leave of absence.

de Quevedo, Luis G., contract surgeon, relieved from duty at Henry Barracks, P. R., and ordered to San Juan, P. R., for duty.

George, William R. S., contract surgeon, relieved from duty in Porto Rico, and ordered to New York City for instructions.

Thorp, Charles W., contract surgeon, ordered from Fort Ethan Allen, Vt., to Plattsburg Barracks, N. Y., for temporary duty with the Fifth Infantry.

Sievers, Robert E., contract surgeon, arrived at Fort Yellowstone, Wyo., for temporary duty in the Yellowstone National Park.

## Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending June 28, 1905.

Carrington, P. M., surgeon, department letter of April 13, 1905, granting leave of absence from May 2, 1905, amended to read one month and nine days.

Clark, Taliaferro, P. A. surgeon, granted leave of absence for one month, from July 7.

Goldberger, Jos., P. A. surgeon, to proceed to Grafton and Morgantown, W. Va., for special temporary duty.

Earle, B. H., asst. surgeon, granted leave of absence for seven days from June 25.

Steger, E. M., asst.-surgeon, relieved from duty at New Orleans, and directed to proceed to Philadelphia for temporary duty.

Gray, R. H., acting asst.-surgeon, granted leave of absence for thirty days, from July 6.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for seven days, from June 14, under paragraph 210 of the regulations.

Owen, H., acting asst.-surgeon, granted leave of absence for thirty days, from July 3.

Sinks, E. D., acting asst.-surgeon, granted leave of absence for twenty-one days, from July 7.

Ryder, L. W., pharmacist, granted leave of absence for seven days, from June 26.

Hall, L. P., pharmacist, granted leave of absence for thirty days from July 10.

Stier, C., pharmacist, to report to chairman, board of examiners, to determine his fitness for promotion to the grade of pharmacist of the second class.

BOARDS CONVENED.

Board to meet at Washington, D. C., June 27, 1905, for the physical examination of candidates for cadets in the Revenue Cutter Service. Detail for the board: Assistant Surgeon, J. W. Trask, chairman; Assistant Surgeon H. McG., Robertson, recorder.

Board to meet on the Revenue Steamer *McCulloch*, Portland, Ore., July 5, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon B. H. Earle, chairman; Acting Assistant Surgeon C. H. Wheeler, recorder.

Board to meet at Key West, Fla., July 3, 1905, for the examination of Pharmacist C. Stier to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board: Surgeon C. E. Banks, chairman; Acting Assistant Surgeon, S. D. W. Light, recorder.

## Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the period from June 24 to June 30, 1905:

SMALLPOX—UNITED STATES.

Illinois: Danville, June 17-26, 2 cases.
Indiana: Southbend, June 17-24, 4 cases, 2 deaths.
Louisiana: New Orleans, June 17-24, 6 cases, 2 imported.
Michigan: Grand Rapids, June 17-24, 7 cases, 4 deaths.
Missouri: St. Joseph, June 17-24, 6 cases; St. Louis, 2 cases, 1 death.
New Jersey: Newark, June 18-25, 1 case.
South Carolina: Charleston, June 10-17, 2 cases.
Wisconsin: Appleton, June 17-24, 6 cases; La Crosse, 1 case; Milwaukee, June 10-17, 1 case.

SMALLPOX—INSULAR.

Philippine Islands: Manila: May 13-20, 2 cases.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, May 8-16, 223 deaths.
Canada: Winnipeg, June 10-17, 2 cases.
China: Hongkong, April 22-29, 8 cases, 2 deaths; Shanghai, May 6-13, 1 case.
Colombia: Cartagena, June 3-10, 1 case 1 death.
Denmark: Copenhagen, June 3-10, 1 case.
Ecuador: Guayaquil, May 31-June 6, 1 death.
France: Paris, May 27-June 10, 46 cases, 4 deaths.
Germany: Bremen, June 3-10, 2 cases.
Great Britain: Bristol, June 3-10, 1 case; Edinburgh, 1 case; London, 3 cases; New Castle-on-Tyne, 1 case; Nottingham, May 27-June 3, 1 case; South Shields, June 3-10, 1 case.
India: Bombay, May 16-23, 34 deaths; Calcutta, May 13-27, 14 deaths; Karachi, May 14-21, 2 cases, 2 deaths; Madras, May 13-19, 2 deaths.
Italy: Catania, June 8-15, 3 cases.
Mexico: Mexico City, June 10-17, 6 cases, 4 deaths.
Russia: Odessa, June 3-10, 8 cases, 3 deaths; St. Petersurg, May 27-June 3, 10 cases, 3 deaths.
Turkey: Constantinople, May 20-June 10, 6 deaths.
Uruguay: Montevideo, April 1-31, 4 deaths.

YELLOW FEVER—FOREIGN.

British Honduras: Belize, May 25-June 15, 5 cases, 4 deaths.
Ecuador: Guayaquil, May 31-June 6, 12 deaths.
Guatemala: Livingston, June 10, 1 case.
Honduras: Puerto Cortez, May 25-June 15, 18 cases, 8 deaths.
Mexico: Coatzacoalcos, June 11-17, 1 death; Sierra Blanca, 2 cases, 3 deaths.
Panama: Colon, Jan. 23-June 16, 28 cases, 8 deaths; Panama, Jan. 1-June 16, 91 cases, 29 deaths.

CHOLERA—FOREIGN.

India: Calcutta, May 13-27, 42 deaths.

PLAGUE—INSULAR.

Hawaii: Hilo, June 24, 1 death; Honolulu, June 25, 1 death.
Philippine Islands: Cavite, May 13-20, 1 death.

PLAGUE—FOREIGN.

Arabia: Aden, May 12-26, 2 cases, 1 death.
Australia: New South Wales, Newcastle, April 22-May 6, 4 cases, 2 deaths.
Northern Rivers District: Ballina, April 25-May 6, 2 cases, 1 death; Lismore, April 29-May 6, 2 cases, 2 deaths.
India: April 29-May 6, 60,674 cases, 59,253 deaths; Bombay, May 16-23, 577 deaths; Calcutta, May 13-27, 318 deaths; Karachi, May 14-21, 119 cases, 116 deaths.
Japan: Tokyo, May 6-20, 3 cases, 3 deaths.
Panama, Panama, June 26, 1 death.
Perfu: Chiclayo, May 11-31, 12 cases, 4 deaths; Lima, 5 cases, 2 deaths; Mollendo, May 11-31, 6 cases, 7 deaths.

# Society Proceedings

## COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore., July 11-14, 1905.

Amer. Assn. of Life Ins. Exam. Surgeons, Portland, Ore., July 10.
American Medical Editors' Assn., Portland, Ore., July 10.
American Urological Association, Portland, Ore., July 12-13.

## CHICAGO SURGICAL AND CHICAGO MEDICAL SOCIETIES.

*Joint Meeting, held June 7, 1905.*

DR. L. L. MCARTHUR, President of the Chicago Medical Society, in the Chair.

### The Biologic Aspect of Carcinoma.

PROFESSOR G. N. CALKINS of Columbia University, New York City, and biologist to the State Cancer Laboratory, Buffalo, after discussing at length the nature of the various stimuli which cause abnormal proliferation in differentiated cells, mentioned studies of his own that were undertaken relative to the nature of division energy of the cells, to find out what it is that will control it, what will increase or decrease its

activity, what stimuli are necessary, and what conditions of metabolism and morbidity have their effects on it. He mentioned two of the theories which have to do with the explanation of the stimulus of division energy of the carcinoma cells. First, Marchand's, which is analogous to the stimulus of the gall-producing insect poison on plant cells; and, second, the parasite hypothesis. At the State Cancer Laboratory at Buffalo they have some two hundred mice with carcinoma. The original tumor mice, which Dr. Gaylord brought from Professor Jensen's laboratory in Copenhagen, in February, 1904, died on the way from New York to Buffalo. The tumors were removed and put on ice. In three days, when mice were obtained, the tumors were transplanted into normal mice. About 40 per cent. of the transplantations took, and a large number of mice developed carcinoma. These make their appearance in from three to five or six weeks after inoculation, the tumor mice ultimately developing symptoms of cachexia, followed by death. The tumors that developed varied in size from one-third the weight of the mouse, plus the tumor to one-fifth. These tumors were transplanted from mouse to mouse nine successive times. Professor Jensen had similarly transplanted the tumors from mouse to mouse for a period of two and a half years before Dr. Gaylord brought them from his laboratory to Buffalo, so that altogether there have been, in all probability, about thirty to thirty-five generations or trasplantations of this tumor. These tumors are merely metastases from the original growth. The cells of the old tumor in each successive new environment were stimulated to grow and develop into a new tumor. According to the Marchand hypothesis, the primary stimulus which the first mouse received was a poison which originated from deranged metabolism, from malnutrition or from some other product of morbidity in the organization of the mouse. Calkins asks whether we are to assume that there is formed in every mouse morbid products which carry on the stimulus to the dividing energy of the cells. In other words, can the organism produce a toxin which acts as a continued cumulative disease factor? On the other hand, according to the parasite hypothesis, the primary tumor of the original mouse was caused by poison from some parasite. Some advocates may argue that it is an initial parasite invasion: others a continued parasite infection which carries on the primary stimulus through generations of tumors, and causing the production of a large mass of cells which represents ten to twenty times the actual weight or size of the mouse. If the latter view is correct, every epithelial cell has within itself parasites which keep on producing a stimulus to the division energy. There is absolutely no morphologic element in cancer cells, which can be interpreted as parasites, and no morphologic evidence of such parasitism. The advocates of the parasite hypothesis are forced to the conclusion that the parasite must be ultramicroscopic. Calkins does not advocate that view, which, he said, is gaining ground throughout the scientific world. Schaudinn, a very eminent parasitologist, believes in the possibility of ultramicroscopic organisms. The Pasteur Institute has practically accepted this explanation for certain diseases.

In November, 1904, the mouse tumor began to deteriorate; and the mice showed signs of natural immunity and ability to throw off disease. A great many mice spontaneously recovered. They have had altogether over a hundred and fifty cases of spontaneous recovery from true carcinoma in mice. They think the tumor material was growing physiologically old, and that it would die out and their means of experimentation would be lost. A tumor, however, was transplanted to a new strain of mice, and the virulence of the cells was restored, so that the mice died in from three to five weeks after inoculation. Dr. Clowes, chemist of the laboratory, conceived the idea that the blood from such a spontaneously cured mouse might carry immunity. He inoculated some mice having tumors of small size with the immune blood from a mouse that had spontaneously recovered. This was done in a number of cases, and six tumors disappeared by this immune serum. Experiments have shown that immunity thus acquired has been efficient up to the present time, and has carried with it protection to the mice against reinfection. The experiments have been tried subsequently in a slightly different form. In one such experiment, for example, forty-five mice from the same source were taken; twenty-three of them were treated with cancer mush plus the immune serum from the mice which had spontaneously recovered; and twenty-two of them were treated with cancer mush plus the normal blood of normal mice. The only difference between them, apparently, was the immune factor from cases in which the mice had spontaneously recovered. In the twenty-three mice treated with this immune serum, three developed tumors. In the twenty-two mice that were treated with normal blood, plus the serum, ten tumors developed, or about the proportion of tumors successfully produced by the inoculation method.

This, in brief, he stated, is the proposition, from a biologic point of view, of the cancer problem to-day. It is not known what causes the stimulus. It is not known that there is a parasite in cancer. It is not known that a specific poison produced in any way is the cause of carcinoma; nor is there sufficient evidence on biologic and cytologic grounds to justify the hypothesis of Farmer, Moore, Walker and Bashford. Progress, however, is being made.

DR. E. WYLLYS ANDREWS read a paper in which he discussed the past and future surgery of carcinoma.

### The X-Ray Treatment of Carcinoma.

DR. WILLIAM ALLEN PUSEY emphasized the point that carcinoma tissue on the surface can with practically unvarying regularity be destroyed with *x*-rays and be replaced by healthy scar tissue. But when we come to carcinomas more deeply situated, we are not in possession of many authentic facts. He has had two cases from which he can furnish definite postmortem data. These two cases were primary carcinomas of the breast. One of these, an old woman, had a large primary carcinoma of the breast without involvement of the skin, with enlarged axillary glands, and with spinal metastasis when the treatment was begun. The patient received vigorous *x*-ray exposures, lasting about a month, with the production of a dermatitis which subsided completely before her death, about three months after the treatment began. At the postmortem examination it was found that the breast was a mass of connective tissue, without any carcinoma tissue remaining. The same is true of the axillary contents. They were converted into a mass of connective tissue without the remains of carcinoma.

In the second case there was a large primary carcinoma of the breast without involvement of the skin, and with enlargement of the axillary glands. She received vigorous treatment for six weeks, with the production of only a mild reaction. About three weeks afterward she developed an acute gastritis, from which she died. On postmortem it was found that the tumor of the breast had been converted into a small fibrous mass about the diameter of, and two-thirds the length of, an index finger. The carcinoma had been destroyed, and there remained in its place a small mass of scar tissue. In this case the axillary glands had not been affected. He believes that any epithelioma which has not metastases, and which has not deeply involved the subcutaneous tissue, may be symptomatically cured by *x*-rays. As to *x*-rays stimulating the growth of carcinoma, which they can not cure, he has seen no cases which would lend weight to this hypothesis. On the contrary, he has had many cases in which the amelioration of the condition during *x*-ray exposures was explained away by calling attention to how frequently these cases do better than is to be expected.

#### DISCUSSION.

DR. ARTHUR DEAN BEVAN said the first thing that impresses him in the clinical study of carcinoma is that it is primarily a local disease, limited to one point, sometimes to a few points. One sees clinically occasionally epithelioma, for instance, which, when examined carefully, shows three or four points of invasion very close together. Clinically, we see carcinoma involving occasionally both breasts. These exceptions do not, however, disprove the statement that carcinoma is primarily a local disease. A second point that impresses him clinically is, that whether carcinoma is a parasitic disease or not, its history is that of a parasitic disease. Whether the researches of the

future show that it is a peculiar chemical stimulus that acts on the cells and produces these changes, or whether it is a parasite, whether it is purely chemical and independent of any low form of life, or the result of some low form of life, made no difference, as the clinical history of carcinoma remains that of a parasitic disease.

In regard to the present results of surgical treatment of carcinoma, these vary in different regions of the body, and the reports from different clinics vary widely. For instance, some surgeons who have made several hundred operations for epithelioma of the cervix, state that possibly less than 5 per cent. of these cases are permanently cured. Some men even have gone so far as to say that less than 1 per cent. of such cases are permanently cured by surgery. On the other hand, cancer of the body of the uterus furnishes a far greater proportion of permanent cures. Carcinoma of the larynx furnishes a comparatively large proportion of permanent cures; while carcinoma of the breast occupies a rather mid-position between extremely fatal carcinoma of the cervix and more favorable carcinoma of the larynx. An analysis of the different statistics of carcinoma of the breast shows that surgical treatment furnishes somewhere between 20 and possibly 30 per cent. of permanent cures.

Another point that has impressed him very much is the three-year limit. It has been taught for some time that if a patient lives beyond three years without recurrence there is little danger of such recurrence. A careful analysis of statistics will show that this is not so. Cases of carcinoma recur three and a half, four, six and even ten years after operation. There is a gradual diminution in the percentage of recurrences as the time period increases from the date of the operation.

He agrees with Dr. Pusey as to the value of the *x*-ray in epithelioma. He thinks it should not be used in cases of thick epithelioma, whether the lymphatics are involved or not. Superficial epithelioma is the form in which the *x*-ray is particularly of value.

There are two great dangers from the use of the *x*-ray. One is that it will produce serious burns in the hands of men who are not experienced in its use. The other is that it will do positive damage when it is used in a case where a surgical operation, if employed sufficiently early, will hold out a good hope of permanent cure, but where delay produced by the use of the *x*-ray wastes valuable opportunity and lessens the chances of permanent cure.

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## AMERICAN PROCTOLOGIC SOCIETY.

*Seventh Annual Meeting, held at Pittsburg, May 5, 1905.*

The President, DR. J. R. PENNINGTON, Chicago, in the Chair.

### The Prevalent Neglect of Proctology.

DR. PENNINGTON, in his address as president, referred to the adverse criticism which the organization and continued prosperity of this society had provoked in certain quarters. He showed that its existence was a logical and necessary step of progress. Special societies arise by a process of natural differentiation. This differentiation, which is unavoidable, by organization of the resulting groups, makes possible a greater definiteness of structure and function of the medical profession. Special organizations have multiplied more rapidly in the past thirty years than during any previous period, and likewise the advancement in the science of medicine has been greater during the same period. The subject of proctology had been neglected in the past until the charlatan claimed it as his special field, and the profession seems still to be doing much to support the claim. Of the sixty-six institutions belonging to the Association of American Medical Colleges, only eight make any provision for teaching proctology. This association adopted a curriculum consisting of 27 subjects. This extensive course provides for thirty hours to be given each to medical jurisprudence, dietetics, hygiene and public health; sixty hours each to nose and throat and genito-urinary diseases, and one hundred and sixty hours to gynecology. No reference whatever is made to the subject of rectal diseases.

It may be claimed by schools that do not include proctology in their curricula that the chair of general surgery devotes a certain number of hours to these diseases. If so, why are there so many reputable physicians in this country who have never heard a lecture on rectal diseases nor witnessed an ano-rectal examination or operation? Dr. Pennington concluded that there is a distinct need for this society, viz., the reclamation of this specialty for ethical medicine, and that the society will exist, prosper and grow in influence in proportion as it meets this need.

### Malignant Disease of the Rectum and Its Treatment.

DR. G. B. EVANS, Dayton, Ohio, prefaced his remarks with a plea for thorough examination of all cases complaining of rectal symptoms. Many cases of uterine cancer have been termed "change of life," and very many cases of rectal cancer "piles," because of neglect of this precaution. It is the consensus of opinion that cancer is at first purely local and that early recognition and thorough extirpation will cure a large proportion of all cases. Formerly Evans was an advocate of colostomy in these cases, but he now believes that this procedure should be reserved for these cases which have advanced so far as to render the radical operation hopeless. The only contraindication he would recognize as absolute is fixation of the rectum by extension of the growth to adjacent structures. The perineal and combined abdominal and perineal routes were recommended.

### "The Ambulant Treatment of Internal Hemorrhoids."

DR. F. C. MARTIN, Philadelphia, strongly defended the injection method. His technic consists of the injection of 7 to 10 minims of a 50 per cent. solution of phenol into each pile tumor at intervals of from two to seven days, depending on the effect produced. As a preliminary to beginning the injection, he recommends divulsion of the sphincters under nitrous oxid anesthesia, much of his success with the method being attributed to this procedure. He concluded that there are not more than 15 per cent. of recurrences, and that accidents and complications are by no means so frequent as after the ligature and clamp and cautery operations. In addition, the method is practically painless and the patient is not detained from business.

### Fecal Impaction of the Rectum.

DR. T. C. MARTIN, Cleveland, emphasized the value of the proctoscope for treatment as well as diagnosis. One of the cases reported was of special interest in that the cause was found to have been a ventral fixation of the uterus in which the rectum, by means of the utero-sacral ligaments, had been anchored so immovably that the patient could no longer "bear down" effectually.

### Urethro-Rectal Fistula.

DR. W. M. BEACH, Pittsburg, after citing a number of cases and describing his method of treatment, drew the following conclusions: 1. Urethro-rectal fistula is comparatively rare and very easily overlooked. When in doubt, use the permanganate test. 2. It generally follows prostatic abscess of gonorrheal origin. 3. It may result from traumatism—faulty use of sound, lithotomy, etc. 4. This is one type of fistula which demands suturing. The suture material should be No. 3 forty-day catgut. 5. The care of the wound should never be left to an assistant; no one can possibly know as much about it as he who made it. 6. A certain number of cases of recent urethral origin will heal spontaneously where the stricture is relieved.

### Pruritus Ani and Its Local Treatment.

DR. LEWIS H. ADLER, Philadelphia, said the male sex is affected in about 95 per cent. of cases. In nearly all the cases the patients are more or less neurotic and of a decidedly bilious temperament. The cases demand the removal of all exciting causes, and regulation of habits of life should precede and attend local treatment. The latter consists in the daily injection into the cavity of the rectum of from 1 to 2½ drams of the following mixture:

| | | | |
|---|---|---|---|
| R. | Ext. hamamelis fld | ℥j | 32 |
| | Ext. ergot fld | ℥ii | 8 |
| | Ext. of hydrastis fld | ℥ii | 8 |
| | Tr. benzoin comp | ℥ii | 8 |

If the peri-anal skin is dry and tough, the entire surface should be painted with a concentrated solution of silver nitrate (960 grains to the ounce). This may require repetition several times at intervals of a few days to restore the skin to normal. After this is accomplished, full strength citrine ointment is to be applied and renewed daily for the first two or three weeks, and thereafter on alternate days or twice a week. This method of treatment may extend over a period of six months, or even longer.

**The Operative Treatment of Tuberculous Rectal Fistula in the Tuberculous.**

DR. J. COLES BRICK, Philadelphia, said that the frequent association of rectal fistula and phthisis has long been recognized. Some authors claim that 5 per cent. of consumptives develop fistula, and Hartman found that of 48 cases of fistula 23 were positively tuberculous. In Brick's opinion the irritating effects of the ether are often responsible for the onset of pulmonary symptoms. For this reason he employs nitrous oxid and oxygen when a general anesthetic is demanded. All raw surfaces are seared with the hot iron. When the case is extensive it is better to perform the operation in stages so as to minimize the period of confinement to bed. Special stress was laid on the after-mangement of these cases. The patient should be kept in bed as little time as possible, but no active exercise is allowed until weight has returned to normal. Forced feeding and out-door air are recommended, and daily sponging with tepid or, if the patient's vitality is sufficient, with cold water, is of great value. A weekly gain of weight is the only standard of favorable progress. Brick advised that all fistula patients be carefully examined for local and pulmonary tuberculosis, and even though the examination be negative, that every case be treated as though tuberculosis were likely to develop.

**Personal Experience in the Employment of Mechanical Vibration in the Treatment of Rectal Diseases.**

DR. W. L. DICKINSON, Saginaw, concluded that this is a valuable method of treatment and deserving of more general use by the proctologist. A number of instances were recounted in which it has been successfully used for the relief of fissures and to accomplish dilatation of the sphincters. But the author thought that its greatest field of usefulness was in the treatment of chronic constipation. He gave the technic of its application in such cases.

**The Office Treatment of Rectal Diseases and Its Limitations.**

DR. JAMES P. TUTTLE, New York, said the trend of practice in rectal diseases at the present day is threefold: (1) Toward a more general resort to operative measures. (2) Toward a wider application of local anesthesia. (3) Toward a great increase in office treatment. These tendencies are due to the following facts: First, the public as well as the profession has learned that non-operative measures can not be relied on for permanent cures. Second, dread of general anesthesia has greatly diminished, due chiefly to improved methods in the use of ethyl chlorid and nitrous oxid, alone or as adjuvants to ether. Third, dissemination of the knowledge that most of the minor rectal surgery can be done under cocain or other local anesthetic with as little pain and almost as little detention from business as is occasioned by the non-operative measures which give only temporary and uncertain relief. Fourth, local anesthesia is being more generally adopted because it is safer, can be quickly applied, simplifies the work, and at the same time, if properly used, permits of as thorough work as general anesthesia. Cocain, eucain, stovain, in 1 per cent. solution, and sterile water, are all reliable local anesthetic agents. Stretching of the sphincter has heretofore been the most difficult thing to accomplish under local anesthesia, but Tuttle referred to a method he had devised, making it possible to operate painlessly on hemorrhoids, fissures, small fistulas, ulcerations, tumors low down and even low strictures. He considers certain conditions requisite: (1) Asepsis; (2) careful selection of cases; (3) complicated and plastic operations not to be undertaken; (4) when general anesthesia is necessary it is better to have patient at home or in the hospital, even though it may be possible to do the work in the office.

**A Contribution to the Pathology of External Piles.**

An abstract of the paper of Dr. J. L. Krouse, Cincinnati, is published in this issues of THE JOURNAL, page 134.

**Summary of Twenty-five Radical Operations on the Rectum Under Local (Sterile Water) Anesthesia.**

DR. A. B. COOKE, Nashville, cited 25 operations: Internal hemorrhoids, 15; prolapsus ani, 2; anal fissure, 2; external hemorrhoids, 6. From this series of cases he drew the following conclusions: The method is simple, safe and effective. Pain at the time of operation is exceptional. Postoperative pain is far less than after the old methods. Time of detention from business is reduced more than half. It offers a reliable means of extending the benefits of surgery to a large class of cases which would otherwise be unsuitable for operation. It robs these operations of their terrors.

**Officers Elected.**

President, Dr. Lewis H. Adler, Jr., Philadelphia; vice-president, Dr. George B. Evans, Dayton; secretary-treasurer, Dr. A. B. Cooke, Nashville. Executive Council, Drs. J. R. Pennington, Chicago, chairman; T. C. Martin, Cleveland, W. M. Beach, Pittsburg.

Time and place of meeting for 1906 were left to be determined by the council later.

## *Therapeutics*

**[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]**

**Treatment of Dyspepsia of Functional Origin.**

All cases of functional dyspepsia may be placed under two heads, according to Dr. Williams in the *Clinical Jour.*, London—those in which the hydrochloric acid is deficient and those in which it is excessive. The cause is the same in both, that is, the retention of food in the stomach long after that organ should have finished with it. The line of treatment which, if successful at all, is equally successful in both, is the practice of giving alkalies before meals. The author refutes the old theory that alkalies given before meals tend to increase the flow of gastric juice, and states that instead of promoting its flow the secretion of hydrochloric acid and pepsin is retarded by the use of alkalies before meals. He explains the action and efficacy of alkalies before meals in that they remove the sticky mucus which has been thrown out and which has occluded the secreting glands, and thus, after the fashion of lavage, they cleanse the stomach and permit it to get rid of the residue that has been left from the last meal and makes it a better receptacle for the next. Consequently, from this standpoint of reasoning, it matters not which of the forms of dyspepsia be present, because in both undesirable matters will be removed. If it is desirable to perform lavage in these cases it should be done with an alkaline solution containing 30 grains of sodium bicarbonate (2.00) to a half pint of water as hot as can be borne.

In one other respect, according to this author, is it unnecessary from the viewpoint of treatment to distinguish between these two forms of dyspepsia, and that is by promoting proper elimination by the bowels. Constipation will nullify every therapeutic effort. The best initial treatment is undoubtedly calomel, as it is both a purgative and an antiseptic. The skin must be properly cared for by hot baths or hot wet pack at the beginning of the treatment. In the further treatment of these two forms of dyspepsia it should be kept in mind that medicines given before meals have the effect of washing out the stomach but exercise no influence on the secretion of gastric juice or on the digestion of food. Therefore, to treat either form of dyspepsia effectually, it is necessary to rely absolutely on the action of the medicines administered after meals.

In the treatment of that form of dyspepsia accompanied by an excess of hydrochloric acid the first thing to be done is to administer a dose of calomel—remembering that brunettes bear this preparation better than blondes—order the patient a Turkish bath, an electric light bath or an ordinary hot bath, and instruct him to take some open-air exercise daily. Warn him against wearing wool or flannel next to the skin and insist on the proper mastication of the food. The great and urgent need in such a case is an antacid, to be taken either as soon as the symptoms appear or, if possible, immediately before their onset. The most efficient antacid is the bicarbonate of sodium which is a pure and simple antacid and possesses no sedative properties. It also tends to increase the amount of gas in the stomach, and this author, therefore, prefers some preparation which is free from this objection and which is at the same time possessed of sedative properties, and he regards bismuth as capable of meeting these requirements. In answering the objections brought against this preparation he states that the disappointment has been in not using it in sufficiently large doses. The minimum dose employed by Dr. Williams is 25 grains (1.65) of subnitrate of bismuth, or the liquor bismuth ammon. citras (B. P.) in 2-dram (8.00) doses. In the administration of either some sedative should be combined with it, such as cerium oxalate or with hydrocyanic acid as is contained in the syrup of wild cherry. The subnitrate may be given in the cachet form or suspended in a mixture. In the cachet form he combines it as follows:

℞. Bismuthi subnit. .....gr. xxv 1|65
Cerii oxalatis.....gr. x |65

M. Ft. cachet No. i. Sig.: Three times a day, as indicated, after meals.

In some cases the patient is gouty, under such circumstances 5 grains (.30) of pulverized resin of guaiac should be added to each cachet. Sodium bicarbonate may also be added. The subnitrate of bismuth should never be combined with the soda in a mixture, as decomposition takes place and carbon dioxid is evolved. If it is desirable, as stated, to give the bismuth in a liquid form, the following combination is recommended by the author:

℞. Liq. bismuthi ammon. cit. (B. P.)
Syr. pruni virg., āā.....℥ii 8|
Aquæ q. s. ad.....℥i 30|

M. Sig.: At one dose and repeated after meals.

The syrup of wild cherry is added for its sedative effect. In order to correct a gouty condition, if present, the tincture of guaiac ammon. dram one-half (2.00) may be added, which must be suspended in mucilage of acacia. Whether giving bismuth in liquid or in powder form, it must always be given after meals, and the length of time after the meal must depend on the size of the meal. A full meal will use up more of the acid secretion than a light meal, therefore, patients frequently suffer more after the light meal, as there is left more free acid in the stomach. It must also be remembered that the pain may not occur after a full meal, taken at night, until 4 or 5 o'clock in the morning. The sucking of alkaline lozenges is spoken of favorably on account of the combined action of the alkali and the antacid effect of the saliva. Sir William Roberts recommends the following combination:

℞. Trochisci bismuthi (B. P.)

Sig.: Two or three to be dissolved in the mouth after meals.

[The foregoing lozenge contains chalk, grains three and a half (.20), and magnesium carbonate, grains two and a half (.15).]

The source of the muriatic acid present is thought to be due to the sodium chlorid, therefore, these patients should be instructed to avoid salted meats and should cut down on the amount of sodium chlorid in the food generally.

To relieve the constipation the author recommends the following:

℞. Sodii sulph.....gr. xx 1|30
Sodii bicarb.....gr. x |65
Essentiæ menth. pip.....m. xx 1|30
Inf. gent. co. q. s. ad.....℥i 30|

M. Sig.: At one dose and repeat three times daily before meals.

The foregoing also serves as a proper cleanser of the stomach by dissolving the mucus present.

In the treatment of the asthenic form, in which there is a deficient amount of hydrochloric acid secreted by the stomach, the first indication, as stated by the author, is to supply the deficiency. Large doses must be given in order to supply this deficiency. The ordinary dose of minims 10 (.65) B. P. is not sufficiently large. The author employs as the minimum dose 25 minims (1.65) combined as follows:

℞. Acidi mur. dil.....m. xxv 2|65
Liq. strychninæ, 1 per cent.....m. v |30
Glycerol. pepsini .....℥i 4|
Aquæ menth. pip. q. s. ad.....℥ss 15|

M. Sig.: At one dose, and repeated three times a day after food.

If necessary other preparations may be added as may be demanded, such as quinin hydrochlorate, liquor ferri chloridi, morphin muriate and liquor arsenicalis. In cases of long standing in which the element of irritation is present, the addition of 10 minims (.65) of liquor morphin hydrochlorate (B. P.) is of great value as it soothes the mucosa and enables it to tolerate the stimulating effects of the hydrochloric acid and strychnia, and in its absence in some cases causes the patient to complain of sufferings with each dose of the acid and strychnia on account of their stimulating effects. For the relief of the constipation, which is so constant in these cases, the use of the natural mineral waters is indicated. The presence of sodium chlorid is indicated in this form of dyspepsia.

The author is emphatic in saying that if the dyspepsia does not yield to one or the other of these forms of treatment then the assumption that the trouble is functional and not organic is incorrect.

### Rhinitis in Infants.

The following outline of treatment, according to an abstract in *Med. News*, is recommended by M. Malherbe in the treatment of rhinitis in children: In the newborn, introduce by means of a syringe or a dropper a few drops of the following mixture:

℞. Menthol .....gr. v |30
Olei olivæ ster.....℥x 40|

M. Sig.: A few drops to be instilled into each naris. Or:

℞. Menthol
Resorcin, āā .....gr. v |30
Olei olivæ steril.....3x 40|

M. Sig.: To be dropped into the nares.

In older children emollient fumigations are of service or the following ointment:

℞. Menthol
Salol, āā .....gr. viii |50
Cocainæ hydrochlor.....gr. v |30
Lanolini
Liq. petrolati, āā.....℥ss 15|

M. Sig. To be inserted into the nares on a small swab.

With an atomizer spray the nose with the following:

℞. Sodii bicarb.
Sodii biboratis, āā.....gr. viii |50
Aquæ dest .....℥i 30|

M. Sig.: To be used in the form of a spray.

In smaller infants all carbolic solutions must be carefully avoided.

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## *Medicolegal*

**Entitled to Rebuttal Physical Examination.**—The Court of Civil Appeals of Texas says, in St. Louis Southwestern Railway Co. of Texas vs. Smith, a personal injury case brought by the latter party, that it is inclined to the opinion that if the plaintiff exhibited his eye to the jury, and his physician then and there undertook, while testifying, to point out the injury to his eye, the defendant company was entitled in rebuttal thereof to call medical experts of its own selection to in like manner examine the eye, and to give in testimony their opinion as a result of such examination.

**Possession of X-Ray Machines—Defenses of Physicians.**—The Supreme Court of Oregon says that in the malpractice case of Beadle vs. Paine, brought to recover for the alleged negligent treatment of a fractured arm, a physician was asked on his examination in chief if there was not an *x*-ray machine in the city where the treatment was given, to which he answered that a certain physician had one. To push the inquiry on cross-examination to the extent of ascertaining whether it was usual in that locality for every surgeon to have a machine of the kind, or whether the one possessed by the physician referred to was the only one to be found in that locality, the court says, was not without the scope of reasonable inquiry. It was germane to the subject entered on by the plaintiff and altogether relevant. It is a good defense in an action for malpractice, where the physician or suregon is charged with negligence or the non-observance of proper care or the want of skill in performing the services undertaken, the court says, that the patient was negligent at the time, which conduced or contributed to produce the injury complained of; but it will not suffice to defeat the action that the injured party was subsequently negligent, and thereby conduced to the aggravation of the injury primarily sustained at the hands of the physician or surgeon, and such conduct on the part of the patient is pertinent to be shown in mitigation of damages only where enhanced thereby, but not to relieve against the primary liability. Of course, if the patient refused or failed to follow the directions given him, he could not complain, the court says, if his negligence in that respect conduced to the injury. That is to say, if it prevented or retarded union or healing of the parts, for the directions were a part of the treatment prescribed, and a want of observance of them on the patient's part would defeat the action. The want of ordinary prudence on the part of the patient would be tantamount to negligence, and, if it was a contributing cause to the injury, the case would be within the rule.

**A Certificate Indispensable.**—The Court of Criminal Appeals of Texas says, in the case of Stone vs. State, where the plaintiff had a diploma from an institution in another state, that it appeared from a reading of Section 8 of the act of the Twenty-seventh Legislature, although one may have a diploma "issued by a *bona fide* medical college of respectable standing," still he must receive a certificate to practice medicine from one of the duly constituted boards of medical examiners of the State of Texas, which shall be recorded, before he would be authorized to practice. The court takes it, however, that it would not be necessary for the plaintiff to be examined by said board, if he had complied with the other provisions of the statute, to-wit, filed his diploma, with satisfactory evidence that his diploma was issued by a *bona fide* medical college of respectable standing, and certificate issued by the board, and properly recorded, as required by the statute. But he did not secure a certificate. Whether he should be examined or not was immaterial, in the absence of the certificate. It was true, the statement of facts showed that the board refused to examine him or issue a certificate. This was a matter that might be reached through the civil courts. But the certificate was the *sine qua non* to his practicing medicine. Having received no certificate, he could not practice. As to whether the board arbitrarily refused to examine him, or not, was a matter with which this court had nothing to do. If the board arbitrarily refused him a certificate, it was no defense to a prosecution for practicing medicine, since he must have the certificate from a board of medical examiners before he could practice. The court would not be understood as holding that he had not complied with the requirements of the statute in order to secure his license, but does hold that he had not secured the certificate to practice, and this must be done before he could practice medicine. Again, it says that it does hold that the act is constitutional, and that, if the boards of medical examiners had arbitrarily refused to give the plaintiff a certificate or license, still he must get such certificate from one of said boards before he could practice. Failing in this, he was subject to prosecution under the terms and conditions of the law. It was contended that the act was unconstitutional on account of giving preference to the allopathic, homeopathic and eclectic schools of medicine, to the exclusion of all other schools, but the court does not think it repugnant to the constitutional provision that "no preference shall ever be given by law to any schools of medicine."

**Morphin Poisoning, Prescriptions and Substitutions.**—Justice Gaynor, delivering the opinion of the Supreme Court of New York, Trial Term, Kings County, for the case of Laturen vs. Bolton Drug Co., says that the charge in the complaint was negligence by the defendant's pharmacist in filling a prescription of one Dr. Cruikshank for the plaintiff, by which she was poisoned by an overdose of morphin or opium, as was claimed. The prescription was: "Elixir Pinus Comp. cum heroin—ounces 4—M—'s. One teaspoonful in water every four hours." The pharmacist saw that it only called for a patent medicine and less than an original bottle. From a pamphlet he had he also found that M. put up "Elixir Pinus Compositus" in the same bottles with the same name on the label, but with the additional two words, "with Heroin," the pamphlet giving a formula showing that the proportion of heroin was 1/24 of a grain to the dram. The pharmacist therefore, in order to fill the requirement of the words "cum Heroin" in the prescription, added 1/24 of a grain of Heroin to the dose to the "Elixir Pinus Compositus," of which he had a bottle in stock. Justice Gaynor holds that there was plainly no negligence in this. But it appeared that the "Elixir Pinus Compositus," according to the printed formula, consisted of nine separate drugs, one of which was "morphin acetate, 1/16 gr.," while the "Elixir Pinus Compositus, with Heroin," omitted the morphin acetate. However, conceding that it was a negligent oversight of the pharmacist to add 1/24 grain of heroin to a dose containing 1/16 of a grain of morphin acetate. Justice Gaynor does not think that the plaintiff could have been poisoned by it. He says that it did not seem to him that there was any evidence on which the jury could be permitted to find that the plaintiff was poisoned by an overdose of morphin, and he therefore dismissed the case. It was not for the jury to guess; the fact had to be proved. Moreover, he believes that a court may take judicial notice of the scientific fact that 1/10 of a grain of morphin taken every four hours could not have poisoned the plaintiff. He says, too, that it was very evident that the names on the two bottles were, taken together, very misleading, and for this reason the prescription was negligent. It should have unmistakably distinguished between the two bottles since the names on their labels did not. Finally, Justice Gaynor says: "My attention is called to the fact that the doctor has published in a medical journal and otherwise the false and invented statement that it was decided in this case that a pharmacist may change a doctor's prescription, or substitute some other medicine than that it calls for, without liability. I regret to feel obliged to say that he is so well known in our courts, where he has been for many years connected with litigations of unsavory character, to say the least, that no notice needs to be taken of his false statement so far as the legal profession is concerned, and I understand that to be so of the medical profession also. But lest any drug clerk may be misled by such false statement to the danger of others, it seems proper that I say that not only was no such thing said or decided, but it was not presented or even mooted. Where would counsel be found to present and argue such an absurd proposition?"

## *Current Medical Literature*

### AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

#### Medical Record, New York.

*June 24.*

1 *Treatment of Inoperable Cases of Malignant Diseases of the Orbit by the X-ray. C. S. Bull, New York.
2 *Treatment of Renal Inadequacy Complicated by an Apparent Nephritis. W. J. Pulley, New York.
3 *Prophylaxis and Treatment of Pyosalpinx. J. N. West, New York.
4 *Formic Acid in Rheumatic Conditions. L. B. Couch, Nyack, N. Y.

1. **X-Ray in Malignant Disease of the Orbit.**—Bull is satisfied that the pain so constantly complained of by patients affected with malignant disease of the orbit has been speedily, sometimes immediately, removed by exposure to the *x*-rays, and that if this is repeated a number of times the pain does not return. In operable cases, whether from extensive spread of the disease or for other reasons, Bull recommends this treatment, because it relieves suffering and may prolong life. He has not observed any of the dangerous or evil effects of the *x*-rays in any of his own cases, such as infiltration and opacity of the cornea, optic neuritis, conjunctivitis and cellulitis of the eyelids. Bull presents detailed reports of ten cases from his own private practice in which the *x*-ray treatment was employed after excision by the knife. Of these ten cases, two were very much improved, if not apparently cured, and of these two one was an epithelioma and the other a carcinoma. The remaining eight cases in which no demonstrable effect was produced by the *x*-rays, were all sarcomata. In the two favorable cases showing entire disappearance of the growth under the influence of radiotherapy, Bull did not observe any evidence of the marked cachexia so frequently recorded in cases of malignant disease treated by this method.

2. **Treatment of Renal Inadequacy Complicated by Apparent Nephritis.**—Pulley draws a sharp line between true nephritis and functional inefficiency of the kidney dependent on other causes. Two instances of the latter and four cases of the former are cited in which improvement followed lavage of the pelvis of the kidney. He believes (1) that chronic nephritis is never cured by purely surgical procedures or any kind of local treatment; (2) that many symptoms of chronic nephritis which are due to an increase of internal pressure can be relieved by decapsulation; (3) that many so-called cases of chronic nephritis are simply mechanical interferences with the normal kidney function, and that the inflammatory process, if any, is of secondary importance; (4) that lavage of the kidney pelvis is limited in its good effects to two conditions only—pyelitis from any cause which affects the functions of the kidneys by increasing their internal pressure, and in parenchymatous and diffuse nephritis when there is a great deal of cellular débris, a concentrated urine, increased kidney pressure and tension of the capsules. Pulley says that the good results by pelvic lavage are obtained in pyelitis by clearing the pelvis and ureters of irritating substances, and in the parenchymatous and diffuse nephritis principally by reflexly influencing the blood supply of the kidney, accelerating the sluggish current, expelling the more or less stagnant blood, thereby bringing to the organ fresh blood, which, in turn, stimulates the kidney epithelia to more vigorous action, and reducing the internal kidney pressure and capsular tension, thus tending to re-establish the normal conditions. The treatment consisted simply in passing catheters, by means of the cystoscope, into each ureter once or twice a week, after which collecting about four c.c. of urine from each kidney for purposes of examination, then washing out the pelves with a warm aqueous solution of nitrate of silver of the strength of from 1 to 5,000 or 10,000. Further treatment was to cut off all proteids from the diet and to keep the patient at rest as far as possible. The only medication given was cathartic, when necessary, and Bashams' solution three times daily.

3. **Treatment of Pyosalpinx.**—West summarizes his paper as follows: 1. In all cases of abortion the patient should be operated on. 2. Gonorrheal invasions should be fought from their start to their finish. 3. The greatest possible aseptic precautions should be used whenever the uterus is entered either by instruments or fingers. 4. In all cases of pyosalpinx the patient should be operated on. 5. In certain cases, the patients may be relieved by a proper form of drainage. 6. An operator should not enter on a case with a fixed determination to do a radical operation. 7. The vaginal route is unsuitable for a radical operation. 8. Vaginal gauze drainage is the best and has its definite indications and use.

4. **Formic Acid in Rheumatic Conditions.**—As the result of four and one-half years of study and chemical analysis of the excretions in endeavoring to elucidate the cause of rheumatism, Couch states that all rheumatism, acute or chronic, muscular or articular, is due to self-generative systematic poison. This poison is chemical and not bacterial. It is a sub-oxidation product, but is not uric acid, which is a product and not the cause of rheumatic condition. Rheumatism is produced by fermentation. It is caused by carbonic acid gas generated in the stomach and bowels, and is due to drinking at meals and to washing the food into the stomach without proper mastication and thorough mixing with the saliva. He was led to study the action of formic acid in the treatment of rheumatic disorders by the experience of a farmer who was cured of the disease after being stung by bees. The histories are given of a number of cases in which remarkable results were obtained. Couch's directions for using the formic acid are as follows: 1. Always cleanse the parts thoroughly before injecting formic acid solution. 2. Never use a stronger solution than 3 per cent.; a 2.5 per cent. solution is better. 3. Never use it without injecting from 5 to 8 drops of a 1 per cent. solution of cocain or other local anesthetic as a preliminary to the formic-acid treatment. 4. Always choose extensor or outer parts of a limb for injecting the remedy and inject it just beneath the skin, though deep injections may be used when occasion demands. 5. Never use more than 8 drops in any one place of either cocain, 1 per cent. solution, or of the formic-acid solution. Use a similar amount of the cocain and of the formic-acid solution. 6. If large doses are used of formic-acid solutions, hard, painful lumps are formed which are slow of absorption and painful; whereas if smaller doses are used no destruction of tissue results and no painful growths supervene. 7. Inject the most painful points and make the injections not less than two inches apart. 8. Couch never has used more than 30 injections at a time, and it is far better to use only from 12 to 15 and to repeat the following day in another place. Avoid all nerve trunks, if possible, since injections involving nerves are apt to be followed by severe pains lasting twenty-four hours. Injections may be given every day, or every other day, till the pain has ceased. It will not be apt to return unless gross carelessness or wilful disregard of plain directions exist.

**American Medicine, Philadelphia.**

*June 2½.*

5 *Bromids in Epilepsy. F. Peterson, New York.
6 *Practical Points Concerning the Technic of Colostomy. S. G. Gant, New York.
7 *Treatment of Incontinence of Urine in Children. N. P. Barnes, Washington, D. C.
8 *Treatment of Appendicitis in the Precarious Stage. J. G. Sheldon, Telluride, Colo.
9 *Therapeutic Value of Ergot in Labor. J. C. Applegate, Philadelphia.
10 *Gunshot Wounds of the Stomach: Report of Two Cases. W. M. Jordan, Birmingham, Ala.

5. **Bromids in Epilepsy.**—Peterson's object in bringing this subject before the profession is to rouse a general antipathy to the indiscriminate use of this drug in epilepsy. He believes that, as a rule, this drug is worse than the disease. The sum total of comfort, happiness and well being of the epileptic would have been greater if the bromids had never been discovered. When the drug is to be employed, it should be used in small doses, combined with some of the harmless remedial agents, like antipyrin and horse nettle, or prescribe, instead of the bromin salts, some preparation of brominized oil, which is less powerful and less noxious.

6. **Technic of Colostomy.**—Gant says that it is not important to select a definite point for the incision, provided it is made below the umbilical level and between the outer edge of the rectus muscle and at least an inch internal to the anterior superior spine of the ileum. Neither is it important that the peritoneum be attached to the skin, since a quick and firm union takes place between the gut and abdominal parts. In cases of elongated mesentery, it is best to amputate several inches of the gut to avoid subsequent prolapse, and it should be removed in from three to seven days after its attachment to the skin, except in cases of complete obstruction, when the intestine should be opened immediately. Artificial ani are closed by the aid of the Gant fenestrated clamp. One blade is placed in each opening and pushed down sufficiently to in-

clude the entire spur when it is released. The clamp divides the spur in from four to seven days; the abdominal edges about the opening are then freshened and sutured under local anesthesia.

7. **Treatment of Incontinence of Urine in Children.**—Barnes says that successful treatment is determined by etiologic factors. Close attention must be given to diet, hygiene, habit and training. Medical, mechanical, and mental treatment are discussed.

8. **Treatment of Appendicitis in Precarious Stage.**—Sheldon believes that operation, not through an interior incision, but through Pettit's triangle, should be the method of choice in treating appendicitis in which the inflammatory process has invaded structures beyond the appendix and is not localized. This operation offers little risk of contaminating the small intestine; it provides efficient drainage, and is not liable to be followed by hernia.

9. **Therapeutic Value of Ergot in Labor.**—Applegate does not regard ergot as an appropriate or safe remedy at any period during labor until the presentation or expulsion of the placenta. He regards ergot as a safeguard and valuable at the end of the third stage of delayed labor or when uterine inertia has been a factor, also after placenta prævia and reposition of an inverted uterus. With a uterus normally contracted, he considers it valueless and rather detrimental when used for the prevention of septic infection, since its tendency is to disturb the venous thrombi and to lock too completely within the uterus excreta that would otherwise be liberated. For the control of hemorrhage, better results are obtained by hypodermic administration.

10. **Gunshot Wounds of Stomach.**—Jordan advocates immediate operation in cases of suspected wound of the stomach. If the stomach is full at the time of operation, he advises syphoning its contents by means of a tube passed through the bullet wound. For closing the perforations, he recommends a purse-string suture of silk, which is reinforced by a second one in order to add strength as well as to increase the approximated area. Nothing whatever should be given by the mouth during the first week, the patient being sustained by nutrient enemas, and water being given by subcutaneous and rectal injections of normal salt solution. Morphin is given for a few days to limit peristalsis and check gastric secretion. A wound of the posterior surface of the stomach constitutes a positive indication for drainage of the lesser cavity of the peritoneum, the presence of such a wound being taken as presumptive evidence of injury to the underlying pancreas or left kidney. Two cases are reported, the first having a single perforation on the anterior surface, with subsequent recovery, and the second presenting two perforations on the anterior surface; death from shock occurred four hours after operation.

## New York Medical Journal.

*June 24.*

11 *Two Cases of Rare Congenital Malformation. H. Fischer, New York.
12 *Demonstration of Flagella of Motile Bacteria and a Simple Method of Making Photomicrographs. E. W. Duckwall, Pittsburg, Pa.
13 Clinical Experience with Antitoxin and the Advantages of Large Doses. L. Fischer, New York.
14 Treatment of Disease with the Roentgen Rays. W. P. Goff, Clarksburg, W. Va.
15 *Anesthesia in Throat Surgery. H. Wallace, Glen Ridge, N. J.

11. **Rare Congenital Malformation.**—The two cases reported by Fischer are a case of meningoencephalocele of unusual size and one of perobranchius and perodactylism.

12. **Demonstration of Flagella of Motile Bacteria.**—The fixing agent used by Duckwall is mordant, and the stain is carbol-gentian-violet or preferably carbol-fuchsin. The mordant requires for its preparation 2 grams of desiccated tannic acid, 5 grams of cold, saturated solution ferrous sulphate (aqueous), 15 c.c. of distilled water, and 1 c.c. of saturated alcoholic solution of fuchsin. The tannic acid is dissolved in the water first by the application of gentle heat; then the ferrous sulphate and then the alcoholic solution of fuchsin are added. To these ingredients, Duckwall adds a certain amount of sodium hydroxid, a 1 per cent. solution, varying from 0.5 to 1 c.c. The best grade of filter paper is used for filtering the mordant, and there should be left a heavy precipitate. After filtering, the color of the preparation should be of a reddish-brown hue, not clear, but somewhat cloudy, and this mordant must be used within five hours after it is made; after that time it loses its staining power. This is indicated by its gradual clarification and darkened color. It gives the best results when strictly fresh and accomplishes its work in a much shorter time, so that very little, if any, heating is required when it is placed on the coverglass preparation. Carbol-fuchsin: Take about 1 gram of granulated fuchsin (not the acid fuchsin), put it in a bottle, and pour over it about 25 c.c. of warm, absolute alcohol. Shake vigorously and let it stand for several hours before using. The carbol-fuchsin is made by diluting the saturated alcoholic solution four or five times with a 5 per cent. solution of carbolic acid. Carbol-fuchsin should be freshly made, heated and filtered before using. A small loop, full of sterile water containing the bacterium, is transferred to the coverglass and gently spread over as large a surface as possible. Carry the drop around the surface without touching the glass with the loop. In this way the surface is moistened, and the loop does not tear off the flagella. The spreading must be done rapidly, because evaporation takes place very soon. After evaporation takes place, there should appear very thin films along the track of the loop. The fixing must not be accompanied by too much heating, because the delicate organs of locomotion are easily burned off. The mordant is poured on, just enough to cover the surface without flowing over the edges. During the steaming of the mordant, it is advisable to keep up a rotary motion in order to avoid too much precipitation. When the mordant is fresh, it requires only from one-half to one minute to get sufficient staining. The mordant is completely washed off under the tap, and a small quantity of absolute alcohol is poured on the surface and instantly washed off. If the alcohol is thoroughly washed off, the water is removed by holding the glass edgeways to a piece of filter paper. Then cover the surface with carbol-fuchsin or carbol-gentian-violet. Allow the fuchsin to stand on the coverglass for about one-half minute, being heated just sufficiently for a thin vapor to be visible; then heat it so that steam is given off quite freely, but never until ebullition takes place. Care must be used when heating the stain, because it is not unusual to find that there is entirely too much precipitation and that the flagella are burned off. Clear with xylol and mount in xylol balsam immediately after staining. The culture used must be made on 2 per cent. agar from young growth in bouillon.

15. **Anesthesia in Throat Surgery.**—Wallace says that for the operator of average skill, the gas-ether sequence, with narcosis pushed well to palatal relaxation, the patient being in the dorsal position, with moderately lowered head, secures the best results as regards least danger to the patient and the greatest facility of operative technic.

## Boston Medical and Surgical Journal.

*June 22.*

16 *Eyestrain, Its Importance and Its Limitations. G. L. Walton, Boston.
17 *Preservation of the Urine. J. B. Ogden, New York.
18 Impetigo Contagiosa: Cutaneous Abscesses Caused by Pyogenic Micro-organisms. J. T. Bowen, Boston.
19 Scabies. J. S. Howe, Boston.
20 Vegetable Parasites of the Skin and Modern Methods of Culture. C. J. White, Boston.
21 Use of X-Rays in Some Skin Affections. F. S. Burns, Boston.

16. **Importance and Limitations of Eye Strain.**—By way of establishing a control, Walton has questioned, regarding headache, 100 healthy individuals with sight, and 42 patients were examined who were either partially blind (whether the blindness was acquired or congenital), or who suffered from acquired blindness coming on at an age after the habit of fixation and convergence was well established. The third class examined contained individuals totally blind since infancy. From a study of these cases, Walton draws the following conclusions:

1. Among individuals totally blind since infancy, 66 per cent. were free from tendency to headache, as contrasted with 31 per cent. of those having sight, and 29 per cent. of those with partial or with acquired blindness.

2. If these figures should prove constant the inference would seem justifiable that half the headaches in health are due to eyestrain. 3. The headache, when present among those totally blind since infancy, partook sufficiently often of the migranoid character to preclude the supposition that all migraine is due to eyestrain. 4. The results of this study would indicate that while migraine and migrainoid headaches have a constitutional basis, and while other factors than eyestrain may act as exciting causes, still eyestrain is one of the most, if not the most, important of these exciting causes, and steps for its relief are imperative.

5. In no case has correction of refraction been given a thorough trial until (a) the glasses are properly centered, (b) their continued readjustment is practiced, (c) the patient looks as much as possible through their centers instead of from side to side, (d) efforts are avoided at straining the eyes to see distant objects with the glasses, (e) spectacles instead of eyeglasses are used, and (f) the use of spectacles is constant, not intermittent.

6 The constitutional headache of the deviate is probably allied to the headache of "brain fag," but is out of all proportion to the sources of fag. Little can here be expected of spectacles.

7. In the proportion in which obsessive tendencies and other signs of constitutional peculiarity accompany errors of refraction, efforts at the correction of refraction will prove unavailing for the relief of nervous symptoms.

17. **Preservation of Urine.**—Ogden's paper is based on 140 experiments with various preservatives, in urines of varying composition: (1) Those with a normal, a high, and a low specific gravity; (2) those with albumin and without albumin; (3) those with sugar and free from sugar; (4) those with a variety of casts and without casts; (5) those containing pus and blood, and (6) those containing crystalline elements. Each experiment was accompanied by a control of the same urine. The control and preserved specimens were allowed to stand in stoppered bottles at room temperature until they had either undergone ammoniacal decomposition or become so changed by the presence of bacteria or deposits that chemical tests could not be satisfactorily applied or the elements in the sediment detected. The susbtances used were boracic acid, formaldehyd, salicylic acid, benzoic acid, corrosive sublimate, chloroform, chloral, camphor, and thymol. Ogden found boracic acid to be the most practical urinary preservative, when used in the proportion of five grains to four ounces of urine. Formaldehyd solution should be used only by the physician or a responsible person. One drop will preserve a pint of urine for about a week. One drop can be used in four ounces of urine without harm.

### Medical News, New York.

*June 24.*

22 Education Within the Medical Profession. P. A. Morrow, New York.
23 Best Way to Treat the Social Evil. H. A. Kelly, Baltimore, Md.
24 Prophylactic Value of Normal Marriage. A. H. Smith, New York.
25 Need of Sexual Education. E. L. Keyes, Jr., New York.
26 Report of Gall-Bladder Surgery, with Especial Reference to Early Diagnosis and Early Operative Interference in Cholecystectomies. (Continued.) F. Martin, Baltimore, Md.

### Lancet-Clinic, Cincinnati, Ohio.

*June 24.*

27 *Pathology of External Piles. L. J. Krouse, Cincinnati.
28 Mesenteric Cysts. O. G. Pfaff, Indianapolis, Ind.

27. **Pathology of External Piles.**—From observation and investigation, Krouse concludes as follows: First, that the walls of the hemorrhoidal veins must undergo some pathologic alterations before an external hemorrhoid can develop; second, that these pathologic changes being present, any undue pressure may cause an aneurismal dilatation of the vein; third, that the internal coat of the vessel being altered, there is more tendency for coagulation of blood with the formation of a clot; fourth, the sexual activity of an individual increases the intravenous pressure and favors the development of the sanguineous tumor. It is, therefore, a disease of adult life; fifth, that the clot is always found in the diseased vessel and never in the connective tissue outside of the vessel.

### St. Louis Medical Review.

*June 17.*

29 *Appendicitis in Its Relation to Pregnancy. H. C. Coe, New York.
30 *Sudden Death During or Immediately After the Termination of Pregnancy or Operation on the Pelvic Organs in Women. E. P. Davis, Philadelphia.
31 Rupture of the Gall Bladder (Spontaneous and Traumatic, with and without operation), an Historical Review of 273 Cases. B. M. Ricketts, Cincinnati, Ohio.

29.—See abstract in THE JOURNAL, June 10, 1905, page 1878.

30.—See abstract in THE JOURNAL, June 17, 1905, page 1957.

### The Post-Graduate, New York.

*May.*

32 Comparative Anatomy of the Anterior Cerebral Artery. W. W. Lesem.
33 Case of Cortical Cerebral Arteriosclerosis with Distinct Focal Symptoms. J. Collins.
34 *Exophthalmic Goiter. J. Collins and F. Robbins.
35 *Hereditary Progressive Muscular Atrophy, Spinal and Bulbar. J. Collins.
36 *Case of Myotonia. J. Collins.
37 Facial Hemiatrophy. J. Collins.
38 Trigeminal Neuralgia. E. G. Zabriskie.
39 Paralysis of the Left Platysma. E. G. Zabriskie.
40 Some of the Changes Found in the Cord After Amputation. E. G. Zabriskie.
41 Commoner Varieties of Alcoholic Insanity. J. Collins.
42 Report of Neurological Clinic of Professor Collins. H. Hoefle.

34. **Exophthalmic Goiter.**—Collins and Robbins present a brief historical review of exophthalmic goiter and a résumé of theories concerning its etiology, with deductions based on the observation and study of 100 consecutive cases.

35. **Hereditary Progressive Muscular Atrophy.**—Collins records the history of a girl, aged 13, in whose ancestory a similar disease was seen extending through several generations. In five generations, ten individuals have been afflicted. The disease developed at any age, and the beginning symptoms indicate an involvement of the spinal cord in one case, and of the medulla oblongata in another, but the latter was eventually affected in all of them.

36. **Myotonia.**—The case of myotonia reported by Collins differs in every particular from previously reported cases. There was no history of a similar disorder in the patient's family; the myotonia occurred only on purposeful movements and tended to increase so long as these movements were kept up, and there is an absence of the myotonic reaction, although what it has in common with congenital myotonia is the hypertrophy of the muscles and the absence of symptoms pointing to gross disease of the nervous system. When the patient first came under his observation, Collins was inclined to look on it as an intention spasm of the nature of an occupation neurosis, but the continuance of it, now about five years, its gradual increase in severity, the absence of an adequate cause, and associated symptoms, lead him to disregard that diagnosis.

### Bulletin of the Johns Hopkins Hospital, Baltimore.

*May.*

43 *Hyperplasia of the Chromophile Cells of the Hypophysis as the Cause of Acromegaly, with Report of a Case. D. D. Lewis.
44 History of the Circulation of the Blood. Contributions of the Italian Anatomists and Physiologists—their Bearing on the Discovery by Harvey. J. C. Hemmeter.
45 Comparative Surgery. C. M. Faris, H. C. Tracher, and others, and an Introduction by Harvey Cushing.
46 Two Cases of Hemorrhagic Cyst of the Thyroid Gland. C. M. Faris.
47 Report of Two Cases of Uterovaginal Prolapse. H. C. Thacher.
48 Report of Eight Cases of Canine Neoplasm. J. F. Ortschild.
49 Cases of Hernia in Dogs. F. C. Beall.

43. **Cause of Acromegaly.**—Lewis' case is noteworthy in that it came to autopsy at an unusually early stage of the disease, the usual clinical course of a benign or chronic case having been interrupted by death due to cerebral embolism and secondary hemorrhage. The hypophysis appeared normal on gross examination, but microscopic examination revealed a high hyperplasia, especially of the chromophile cells, which is confirmation of the theory that acromegaly is caused by excessive function of the glandular elements of the anterior lobe of the hypophysis.

### Denver Medical Times.

*May.*

50 *Intracerebral Injections of Antitetanic Serum in Traumatic Tetanus. S. D. Hopkins, Denver, Colo.
51 Recurrent Perinephritic Abscess, of Twenty-six Years' Standing, Presenting a Clinical Picture of Addison's Disease. G. A. Mollen, Denver, Colo.
52 A Supplementary Report. R. C. Coffey, Portland, Ore.
53 Treatment of Gastrointestinal Diseases in Children. D. T. Quigley, North Platte, Nebraska.
54 Normal Obstetrics. The Diagnosis and Management of Labor. T. M. Burns, Denver, Colo.

50. **Intracerebral Injections of Antitetanic Serum.**—In the three cases of traumatic tetanus reported by Hopkins, a small trephine opening was made in the right frontal bone half way between the outer angle of the orbit and a point on the vertix at the juncture of the line crossing between the two auditory canals. A small slit was made in the membranes and the needle introduced two inches into the substance of the frontal lobe of the brain, this lobe being selected for the injection because the patients were right-handed. The needle is directed forward and slightly downward. In three cases 20 c.c. were injected into the cerebral substance at once, and Hopkins believes that the success of this method of treatment depends on the use of large quantities of the serum. The serum treatment was followed up with sodium bromid and chloral hydrate, given by enema, at varying intervals, for several days, and then small doses by mouth, a sufficient quantity being used to keep the patient asleep most of the time.

### Journal of Cutaneous Diseases, New York.

*May.*

55 *Effect of the Roentgen Ray on Paget's Disease of the Gluteal Region. J. A. Fordyce, New York.
56 *Staphylococcic Infection of the Tonsil Simulating a Chancre. D. W. Montgomery, San Francisco.
57 Mulberry-Colored Spots on the Skin of the Lower Spine of Japanese and Other Dark Races: A Sign of Negro Descent. A. S. Ashmead, New York.

55. **Roentgen Ray in Paget's Disease.**—Fordyce reports the case of a woman 60 years old who received an injury on the left gluteal region, at which site there developed, about a year later, a dark red spot which slowly increased in size, at times was somewhat painful, but never gave rise to a discharge which was at all pronounced. In its color, general and microscopic appearance, and slow eccentric progression, it was strikingly similar to the usual type of Paget's disease of the nipple. The center of the lesion showed the structure of a small-celled epithelioma of the rodent ulcer type. The patient received ten *x*-ray exposures at intervals of a week, each averaging about ten minutes. The target was held at a distance of from four to six inches from the affected area. A pronounced reaction was observed after six or seven sittings. The lesion apparently became much larger, was painful, discharged pus freely, and apparently extended at the margins. The use of the *x*-ray was discontinued under the impression that it was doing harm. After a week or two the discharging surface healed rapidly under local treatment, and after a month, the sore had completely cicatrized, leaving a smooth scar. An examination of the patient twelve months after the cessation of all treatments showed no evidence of a recurrence. Fordyce concludes that until the ultimate cause of Paget's disease is revealed, cases similar to the one reported must be classed as of doubtful nature or as transitional forms between some of the less common types of superficial epitheliomas and the well-known pre-cancerous condition of the breast.

56. **Staphylococcic Infection of Tonsil.**—Montgomery describes the appearance of the tonsil as follows: "There was a circular 'crateriform' ulcer, or what appeared to be an ulcer, the size of a nickel on the left tonsil. The floor of this ulcer had a yellow covering and its edges were rounded and raised. The left anterior pillar of the fauces was bulged forward, rounded and smooth, and of a deep red color. There was a small extension of the ulcer downward, but its general outline was circular. On looking into the mouth, the observer looked right straight down on the floor of the ulcer, and it gave the impression of being a chancre. On palpating the sore, it was not found to be very hard, only fairly firm. The ulcer was not painful, but the patient expectorated a good deal, and it evidently irritated him. There was one enlarged lymphatic nodule behind the left ramus of the jaw, which was smooth and firm, but not hard. This lymphatic nodule was tender, and there was also some pain and discomfort on the left side of the neck from the ear downward, which had been present for several days. The left epitrochlear lymphatic nodule was enlarged, but soft. The only micro-organisms found were staphylococci. There was no fever, and the patient had good general health. Such history as was given was corroborative of the view that the lesion was a chancre, or at least syphilitic. Against this was the fact that there were no concomitant symptoms. The present case reversed the usual errors, and was a comparatively insignificant affection, that bore a striking resemblance to a chancre, and was thought by well-trained men to be either a chancre or an epithelioma, a mistake that was not the result of ignorance, as the clinical type here represented is very rarely seen, and no one, on first seeing it, could be blamed for not recognizing its true character, that of a staphylococcic infection of the tonsil.

### Archives of Pediatrics, New York.

*May.*

58 *Congenital Tuberculosis. M. Wollstein, New York.
59 Intrauterine Amputations and Amniotic Bands. W. L. Stowell, New York.
60 Gonococci Infection of the Eye in Infants. J. E. Weeks.

58. **Congenital Tuberculosis.**—Wollstein reports the pathologic findings in a case of advanced tuberculosis, the patient dying six days after the birth of the child, in the eighth month of pregnancy. Considering the advanced stage of the tuberculous lesion in the endometrium, Wollstein assumes that the basal decidua was first affected, the tubercle bacilli traveling from the decidual sinuses to the covering of the villi, localizing there and causing thrombi in the adjacent intervillous spaces, with destruction of the syncytium, entering the villous stroma, and finally reaching the chorionic villi. Thus all four varieties of placental tuberculosis are illustrated in this case. That the fetus was infected comparatively late (just before birth) might be argued from the early stage of the tubercles in the child, which had lived for nineteen days.

### Colorado Medicine, Denver.

*May.*

61 Use of the Anesthetic Somnoforme. W. L. Hess, Denver.
62 Mastoid Operation—Reported Cases. R. G. Davenport, Trinidad.
63 Operative Cases of Converging Strabismus, with Photographic Illustrations. W. C. Bane, Denver.
64 *Advantages of a Simple Surgical Equipment and Technic. H. C. Wetherill, Denver.

64. **Simple Equipment and Technic.**—Wetherill says that the essentials of a good operating room and equipment are simplicity and facility for scrupulous cleanliness. The room should be flooded with a soft, diffuse light; it should be well warmed, well ventilated, without draughts, and not too large. The equipment should be simple and readily cleaned, and the basins or sinks accessible for disinfection of sterilization of every part. Plain white enameled sinks with portable basins are clean, are easily washed and boiled, and promote the free use of soap and water. The armamentarium should be simple and easily sterilized. It promotes rapidity and dexterity, and materially lessens the risk of contact infections. The suture and ligature material must also be simple in its preparation, and soft and strong and of no greater caliber than is absolutely necessary, particularly if it be of silk or catgut. The sterilization of the hands of the operator and his assistants, and of the skin of the patient should be as simple as possible, compatible with safety. Wetherill's method consists in a thorough scrubbing with soap and hot water for twenty minutes or more, rinsing in a 1 per cent. formaldehyd solution, and washing with 95 per cent. of alcohol. In the performance of round ligament or hernia operations and in certain celiotomies, he uses rubber gloves. The soap Wetherill uses is easily made, is inexpensive and is an excellent cleanser. It leaves the hands soft and smooth. It is called the Denver Woman's Hospital Soap, and is made as follows: Life Buoy Soap, 2 bars; water 2 quarts; turpentine, 4 ounces; alcohol, 8 ounces. Cut the soap into fine shavings and boil with water until it is dissolved. When cool, add the turpentine and alcohol and shake well in a jar or flask. The turpentine and alcohol dissolve the fats and empty the pores, and if very hot water is used, so that the hands and arms are made to perspire, and the water is frequently changed, the sweat glands are stimulated and the germs are washed out of their mouths. The elaborate preliminary preparation of the patient also is unnecessary. Purging is also injurious and ordinarily quite unnecessary. Instead of stimu-

lating peristalsis, aim to promote peristaltic arrest by prohibiting food and drink and administering opium or morphin, if absolutely necessary, to encourage these conservative agents, as well as for the relief of the pain which the inflammatory reaction produces. The number of assistants should be limited to those actually indispensable, and irrigation and drainage should be restricted.

### Journal of Nervous and Mental Diseases, New York.

*May.*

65 Arteriosclerosis in Its Relation to Diseases of the Nervous System. E. D. Fisher and H. Brooks.
66 Treatment of Cerebral Palsies and Athetosis by Nerve Anastomosis and Transplantation. W. G. Spiller and C. H. Frazier.
67 Location Within the Spinal Cord of the Fibers for Temperature and Pain Sensations. W. G. Spiller.
68 *Curability of Epilepsy. J. W. Wherry.

68. **Curability of Epilepsy.**—Wherry is of the opinion that the ideal treatment of epilepsy is practically impossible under ordinary circumstances. The tendency of modern medicine is to systematize and to classify, and then to formulate a general treatment which is to apply to all cases of each class. The individual is frequently forgotten and always overlooked. When a patient fails to respond to the prescribed drug, he is said to possess an idiosyncrasy. The study of epilepsy must be individual in its character, because the fundamental element of the disease is its individuality. Each patient is a case in himself, and no two patients can be treated successfully from the same formula. One of the chief characteristics of the epileptic is his mental, moral and physical instability, and this feature must receive serious consideration, if a recovery is hoped for. The convulsion is not all there is to epilepsy. To suppress the convulsion with drugs is accomplishing not real good, if the patient is to become an imbecile or a dement as a result. The treatment of epilepsy must embrace the whole individual, mentally, morally and physically. Wherry suggests as the treatment of epilepsy: A study of each case individually; special adaptation of drugs to individual conditions; personal supervision and individualization of diet; absolute change of environment. The treatment must not be postponed until the disease becomes well established. Epilepsy, instead of being an incurable disease, under the most favorable circumstances, has shown a schedule of recoveries in excess of some other diseases, and which in the future will be made much larger.

### Annals of Ophthalmology, St. Louis.

*April.*

69 *Conjunctivitis Petrificans. W. C. Posey, Philadelphia.
70 Gonorrheal Ophthalmia—with Involvement of the Anterior Ethmoidal Cells; Report of a Case. G. F. Suker, Akron, Ohio.
71 Unusual Effects of Iodid of Potassium. H. Gifford, Omaha, Neb.
72 Latent Hypermetropia, the Cause of the Difficulties Attending Refraction Work. L. S. Dixon, Boston.
73 Case of Adenoma of the Meibomian Glands. G. Pause.
74 *Treatment of Infection After Cataract Extraction. H. F. Hansell, Philadelphia.
75 Alterations Following Extirpation of the Superior Cervical Sympathetic Ganglion. E. Gasparrini, Torino, Italy.
76 Constitutional Aspect of Sympathetic Ophthalmia. C. Schulin, Billings, Mont.
77 Injury Resulting in Cutting of the External Rectus Muscle, and Probably Laceration of the Optic Nerve. F. Vinsonhaler, Little Rock, Ark.
78 Practical Application and the Relative Value of the Tests Used in Examining the Eye Muscles. A. Duane, New York City.
79 Contribution to Serum Therapy, Especially of Ulcus Corneæ. L. Paul, Breslau.
80 Facts Versus Fancies Concerning Heterophoria. F. C. Hotz, Chicago.

69. **Conjunctivitis Petrificans.**—Posey's case, a female, aged 30, presented irregular opaque areas situated in the conjunctiva under the epithelium and projecting but little above the surface. There were but few symptoms of irritation, and these were scanty secretion, with a tendency to spontaneous disappearance without leaving any trace in the early stages. The treatment consisted in carefully dissecting out many of the chalky areas, in the employment of a boracic wash and of a solution of atropin.

74. **Infection After Cataract Extraction.**—Hansell discusses this subject under the heads of precautionary treatment; preventive measures, such as exclusion of conjunctival and lachrymal disease; the exclusion of sources of endogenous infection, and the preparation for operation. Besides the local treatment, he urges stimulating and supporting constitutional treatment.

### Archives of Ophthalmology, New York.

*May.*

81 Amaurosis from Filix Mas. Dr. Stuelp.
82 Purulent Inflammation During Fetal Life as the Cause of Microphthalmos and Anophthalmos. Prof. Hoppe, Cologne.
83 *Transplantation Method for the Treatment of Trichiasis, and New Instruments for the Operation. P. Briganti, New York.
84 Case of Cysts of the Pars Iridica Retinæ. E. L. Oatman, Brooklyn, N. Y.
85 Anomalies of the Vascular System of the Optic Papilla. C. J. Kipp, Newark, N. J.
86 Pathological Anatomy of Glaucoma. W. Dolganoff, St. Petersburg.
87 Accessory Apparatus for Locating Foreign Bodies in the Eye and Orbit. G. L. Dixon, New York.

83. **Treatment of Trichiasis.**—In order to remedy certain defects and to make the operation easier to perform, Briganti has devised a change in the technic of the so-called Italian method, adopting new instruments, and also a modification of the method itself, which, while insuring a fresh bleeding surface for the flap in its whole length, avoids the cutting of the hairy border. The instruments devised are two: One is called the marginal forceps, the other, the flap forceps. The former are made right and left, and are intended for the marginal incision. They are like thick forceps up to the elbow, at which point they form an angle of about 125 degrees. The flap forceps carry on one branch a small oblong plate, which is slightly curved from side to side to adapt itself to the curvature of the lid. The other branch, in one model, terminates in a narrow piece attached at its middle and shaped to follow the outline of the margin of the lid. The other model resembles closely Desmarre's entropion forceps, except in the curvature of the flap guide. The plate of the flap forceps is placed beneath the margin, and the screw arrangement tightened. The surgeon then makes incisions on the integument covering the lid along the margins and on the guide of the narrow piece, being careful that the resulting skin flap is attached at its extremities. The instrument is now removed and the lower incision completed in the middle. Both marginal and flap forceps, when properly placed and fixed, exercise sufficient pressure to prevent hemorrhage, thus shortening considerably the time of the operation. The flap is now very carefully dissected and deprived, as far as possible, of superfluous subcutaneous connective tissue. The marginal incision must be about 3 mm. deep, the deeper the better, as the flap will attach much easier. The section is made between two imaginary lines, one represented by the excretary ducts of the Meibomian glands, the other by the lashes. As soon as the flap is ready to be placed in position, the marginal cut is freshened, so as to bleed, and completed by prolonging it at each end, in order to connect it with the skin wound resulting from the detaching of the flap. The prolongation of the incision toward the inner canthus is made in that part of the margin normally deprived of lashes, and must follow a straight line as much as possible. Sometimes it is a necessity to cut off a very thin strip of marginal tissue, which is replaced by the flap, so as to insure an even surface after the attaching. The prolongation outward is made as close as possible to the outer canthus and also as nearly straight as possible; the prolonged marginal section at either end meets the apex of the skin wound at a very small angle. The flap is allowed to lie on the resulting continuous, bleeding surface, and the ciliary border of the lid is practically displaced upward and rotated outward as far as the thickness of the flap. This done, the skin wound is sutured and a vaselin dressing applied, care being taken in separating the margins of the lids by using a thin cotton pad saturated with vaselin. The dressing is repeated every day for a week or so, and removed as soon as the healing of the wound is assured.

### Journal Missouri State Medical Association, St. Louis.

*May.*

88 Etiology and Treatment of Eclampsia. H. Schwarz, St. Louis.
89 *New Hemorrhoidal Clamp Permitting Suture of Seared Surface Before Removal of Instrument. R. F. Amyx, St. Louis.
90 Value of Getting Certain Patients Up Very Early After Laparotomy. W. Bartlett, St. Louis.

91 Strangulated Umbilical Hernia in which Cecum, Appendix, Ascending and Transverse Colon Were Found Gangrenous in Sac—Artificial Anus made at Primary Operation, Followed Ten Weeks Later by Double Resection to Restore Intestinal Continuity. J. Y. Brown, St. Louis.
92 Certified Milk in St. Louis—Rules and Regulations Governing the Production and Distribution of Certified Milk in St. Louis Under the Auspices of the St. Louis Pure Milk Commission.

89. **New Hemorrhoidal Clamp.**—Amy has endeavored to add to the ordinary clamp in common use an auxiliary which, he believes, possesses sufficient advantages to warrant its use in all operations on hemorrhoid. Two flat pieces of metal are welded on the upper surface of any ordinary clamp, each half corresponding to the blades of the clamp. The surfaces of the pieces of metal are furrowed at intervals of one-fourth of an inch across each blade of the clamp, and extending the entire length of the blades of the clamp. These furrows, when the clamp is closed, come together and form furrows extending across the face of the clamp, each furrow being one-half inch in length and one-eighth of an inch in depth, and extends down to the original biting portion of the clamp. The sutures can be applied very easily with a small curved needle. It can be either a continuous or an interrupted suture, and should be applied before removing the clamp. The curved needle carrying the suture should be passed down into each furrow, and should be kept in contact with the bottom of the furrow, so that the suture will enclose sufficient tissue in order not to cut through. With this device, the clamp and cauterized surface are securely fixed together, so that early hemorrhage does not occur; it gives a better opportunity for early union, so that separation of the clamped portion will not follow; ulcerative processes do not follow, and the possibility of late hemorrhage is limited. The clamp affords all the advantages of any now in use.

## FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal.

*June 10*

1 Errors of Diagnosis in Medicine. J. R. Bradford.
2 Micro-organisms of Meat Poisoning and Their Allies. H. de R. Morgan.
3 *Spirochetes in Syphilis. E. J. McWeeney.
4 Pharmacology and Therapeutics of Ice. V. G. L. Fielden.
5 *Sanatorium Treatment of Phthisis. W. S. Paget-Tomlinson.
6 *Drug Treatment for Inebriety. J. S. Bolton.

3. **Spirochetes in Syphilis.**—McWeeney was able to demonstrate spirochetes in nine cases of undoubted syphilis in the primary and secondary stages. In a case of advanced tertiary ulceration of the palate he failed to find them, and also failed in a case of mucopurulent vaginitis, unaccompanied by ulceration and considered not to be of a syphilitic nature. The method of examination was that employed by Schaudinn. The organisms found are described as follows:

Spirally twisted, extremely delicate organisms, actively motile, with peculiar corkscrew movement in either direction. Length from 7 to about 18 microns, averaging about 12 microns. Thickness too small to measure. Some were equally thick throughout; others, more especially the longer ones, were decidedly thicker in the middle, and tapered, slowly at first, afterward more rapidly, toward the ends. The coils were often seven or eight in number, not regularly spiral, more open, toward the extremities, sometimes nearly effaced. The smaller spirochetes looked like detached flagella of the typhoid bacillus in a Pitfield preparation.

McWeeney is convinced that his findings verify those of Schaudinn and Hoffmann, and concludes his article by referring briefly to the findings of others in the same line of work.

5. **Sanatorium Treatment of Phthisis.**—An experience of five years, during which 224 patients came under his care, prompts Paget-Tomlinson to conclude as follows: First—That although sanatorium treatment as applied to the poor is less satisfactory than in the case of the rich, it is undoubtedly of great value. It is not too much to say that by its means, when judiciously applied, in nearly all the early cases, and in a considerable proportion of the medium cases, the patients can be restored to comparative health and the power of earning a living. Second—It is of no small importance that all these patients are prevented from drifting into the advanced stage, when they would become a much greater source of infection to all about them. Third—The lessons learned in the sanatorium as to open-air methods can not fail to have a beneficial influence on the future home-life; thus is the gospel of fresh air spread far and wide, manifesting its healing effects in other diseases besides consumption. Fourth—Knowing that the great difficulty physicians have to contend with in treating the consumptive poor is the return to the old conditions of life, more pains should be taken to consolidate the cures: 1, By a more prolonged residence in the sanatorium; 2, by urgently advising an alteration in the occupation, whenever possible, if this has been an injurious one. It would seem that sufficient organized effort has not been made in the direction of providing agricultural or horticultural colonies for patients leaving sanatoriums and especially for those who have previously followed an unhealthy trade. There are many difficulties in the way, but it seems a very important adjunct to sanatorium treatment and, if widely adopted, we should probably hear of fewer relapses. Lastly, it is of the first importance that "homes" for patients in advanced stages should be provided in all large towns and in county districts, where patients may pass their closing days in comparative comfort, and, above all, where they will cease to be a source of dangerous infection to the inmates of their own crowded homes. If this scheme were complete throughout the land, combined with an adequate provision of sanatoriums and colonies for the establishment of health, there is every reason to believe that consumption would be abolished in a comparatively short space of time—a happy result, carrying with it the extinction of much misery and suffering, and, in the long run, proving a considerable financial gain to the country.

6. **Drug Treatment for Inebriety.**—Bolton's treatment consists of the injecting into the muscles of a watery solution containing grain 1/60 of strychnin hydrochlorid and grain 1/30 of atropin sulphate.

### The Lancet, London.

*June 10.*

7 *Pleurisy; Its Pathology, Diagnosis and Treatment. N. Moore.
8 Notes on Plague. A. M. Elliot.
9 *Chemical Examination of the Gastric Contents with an Accurate Clinical Method of Determining the "Active" Hydrochloric Acid. W. H. Willcox.
10 *Electrostatic Treatment. J. C. Webb.
11 Case of Pyrexia Following Childbirth Treated with Antistreptococcus Serum. P. H. Ward.
12 Dislocation of the Carpal Scaphoid. A. Fullerton.
13 Poisoning by Fluid Ammonia Used for Domestic Purposes. H. Savory.
14 Slight Errors of Refraction and Their Influence on the Nervous System. C. E. Pronger.

7. **Pleurisy.**—Moore maintains that, apart from injuries, pleurisy is to be regarded as part of a condition which has generally begun in the respiratory tract, but sometimes in the pericardium (especially in rheumatic fever), and now and then in the peritoneum, and that the origin ought always to be carefully investigated. Empyema is a frequent result of lobar pneumonia and also of tubercle. Large non-purulent effusions are due to pneumococcal or tuberculous affections. Tubercle reaches the pleura from the lung in most cases and in a few from the peritoneum. The diagnosis should take a wide survey of the origin of the disease and not be confined to the interpretation of physical signs. In regard to treatment, he agrees with those who are in favor of evacuating all large serous effusions and all collections of pus, and in the latter case he is more and more inclined to favor the method of resection of a piece of rib as procuring better drainage and, therefore, more speedy recovery. The patient should be kept under observation till he may be considered free from the condition of which the pleurisy was the most prominent manifestation. In pleurisy, regulations as regards fresh air and diet, followed out in all cases, would often prevent the development of permanent tuberculosis later in life.

9. **Method of Determining Active Hydrochloric Acid in Stomach Contents.**—Willcox describes his method as follows:

Two equal volumes of the filtered gastric contents (20 cubic centimeters)) are taken. (a) One portion is diluted to about 60 cubic centimeters with distilled water, ten cubic centimeters of pure nitric acid, about five cubic centimeters of a solution of iron alum, and a measured excess (30 cubic centimeters) of decinormal silver nitrate solution are added. Decinormal ammonium sulphocyanid solution is run in from a burette until a permanent reddish-brown tint just results. The difference between the quan-

tity of silver nitrate solution added and the ammonium sulphocyanid solution used gives the amount of total chlorids present as decinormal HCl. An evaporating dish may be conveniently used for doing the titration. (If the quantity of gastric contents is limited 20 cubic centimeters may be used for the determination of total acidity with decinormal NaOH and phenol phthalein. This liquid is then used for the estimation for the total chlorids exactly as described above.)

(b) The other portion of the gastric contents is placed in a porcelain evaporating dish (four and a half inches in diameter) and evaporated to dryness on the water bath. The solid residue is heated for about an hour on the water bath. The dish is then placed on a piece of wire gauze and heated with a small Bunsen flame, the flame not coming in actual contact with the dish. The heating is continued for about ten minutes until the residue is well charred. The dish is cooled; about 60 cubic centimeters of water and the pure nitric acid are added, the contents being well stirred with a glass rod. The titration is then performed exactly as described above (a) and the quantity of chlorids present given in terms of decinormal HCl. The difference between the chlorids found in (a) and (b) expresses with great accuracy the amount of the physiologically active hydrochloric acid. The effect of igniting the dried residue of the gastric contents is to drive off the free hydrochloric acid and also to decompose the organic bases which have combined with hydyrochloric acid, thus causing the latter to be also volatilized. The loss in chlorids, therefore, represents "the active hydrochloric acid." It is important that the dish be not heated over a free flame or else inorganic chlorids may be volatilized in small amount. The presence of the black particles due to the charring does not in the least interfere with the accuracy of the titration, since the white precipitate of silver chlorid and silver sulphocyanid forms an effectual contrast to this and the first appearance of a red-bbrown tint in the titration can be immediately seen. It is not necessary to filter off the charred particles as this introduces errors and makes the process unnecessarily complicated.

10. **Electrostatic Treatment.**—Webb says that electrostatic currents find their main field of utility in the treatment of all acute and chronic inflammations not due to microbic origin or to pressure of a growth; chronic inflamed joints, congestion of the liver with constipation, inflammation of nerves or of their sheaths, ulcers, certain skin troubles, inflammatory glandular swellings, chronic or subacute catarrh of the vocal cords leading to hoarseness or aphonia, hemorrhoids, anal fissure, early cases of locomotor ataxia, spasmodic dysmenorrhea, functional neuroses and in treatment of persons suffering from the effects of overwork.

### Indian Medical Gazette, Calcutta.

*May.*

15 *Operation for the Removal of Elephantiasis of the Scrotum and Penis. J. T. Calvert.
16 Prevalence of Malignant Disease in Bengal. J. W. D. Megaw.
17. *Gastroenterostomy for the Relief of Benign Stricture of the Pylorus. W. J. Wanless.
18 Malaria Prophylaxis. S. H. L. Abbott.
19 Cataract Coughing. H. Smith.
20 Pterygium of Bacilli. R. McCarrison.

15. **Operation for Removal of Elephantiasis of External Genitals.**—Calvert describes the operation performed by him on several hundred patients, with a mortality of 1 per cent., as follows: The patient is placed in the recumbent position on the table. A large rubber tube is placed twice around the tumor after the method of McLeod. A longitudinal incision is made from the healthy tissues above the pubes along the dorsum of the penis, or over its supposed situation when invisible, and the penis is rapidly dissected out, the prepuce when free being clamped with forceps and dealt with subsequently. A vertical incision is made over each testicle in turn and these, when freed, are turned up over the pubes. A curved incision is then made from the cut at the root of the penis to the perineum, sometimes even touching the margin of the anus. A similar incision is made on the opposite side. The testicles being held well up, together with the penis, a finger is placed in front of the urethra, to avoid its being injured, and the tumor is rapidly cut away. The cut surface is covered with towels to avoid contamination, the prepuce slit up from within, the glans thoroughly and then the whole of the prepuce and all loose tissue is carefully dissected off the penis. The blood vessels are clamped with forceps and twisted in adults, or ligated with catgut in the case of old men. The cord is now removed, pockets are required made beneath the skin on the inner side of each thigh into which the testicles are pushed and the skin is brought together in one straight line with silver wire sutures. Before closing the wound a drainage tube is introduced from a point about three-quarters of an inch above the root of the penis to the perineum, where it is brought out by preference some little distance away from the anus. The suture nearest the urethra is always of strong catgut lest the penis should be swollen and be cut by pressure on a metal suture. The wound being closed, the penis is put well on the stretch, and the skin all around, except in front of the urethra, is fixed to its sheath by a continuous catgut suture. The penis being still kept well extended, is covered with two or more skin grafts, placed longitudinally, obtained from the front and inner surface of the left thigh. These grafts are kept in position by wrapping two strips of oiled silk about an inch wide and twelve inches long round the still extended organ, followed by two long strips of boric lint wrung out of boracic acid solution and wrapped on wet—the better to fit the penis. This dressing is kept in position by a few strips of twisted gauze tied circularly at intervals. The latter precaution is essential, as it was found that when patients went to stool the dressing sometimes slipped off like a glove. By the above dressing the penis is incased in a fairly stiff splint and can not retract, thus insuring, on recovery, a penis of a length as great, if not greater, than before the onset of the disease. The wound is dressed with strips of perchlorid gauze, sublimate wool and a figure-of-eight bandage. The superficial wound caused by removing the grafts is covered with a piece of lint soaked in picric acid solution, 1 per cent., which is left untouched till healing has taken place under it. The wound is dressed on the fourth day and the tube removed. It is dressed again on the eighth day, on which date or two days later it is usually healed. The penis is dressed on the fourth day, when the oiled silk is removed and strips of gutta-percha tissue substituted. The rapidity of the healing of the penis depends on the success of the grafting. When two grafts are cut sufficiently broad to cover the entire penis healing is very quick and successful. With three or more grafts there is a tendency for the grafts to become displaced and for healing to be retarded. The grafts may also be wound circularly round the penis instead of being placed longitudinally, though Calvert prefers the latter method. Boric lint is used because it is stiffer than ordinary lint and makes a better splint. By wrapping the second piece of lint more thickly at the root than near the glans, the penis will keep erect, even though unsupported, as if in a splint. To protect it from injury in bed a half hoop of split bamboo is fixed over it between the side pieces of the bed. Silver wire is chiefly used on account of its cheapness, as almost every bit can be used. The drainage tube is used because the wound, especially before and at the time of sewing up, is freely douched with perchlorid lotion (1 in 1,000) which, though antiseptic, is irritating and gives rise to a certain amount of reaction. Smaller tumors are dealt with after the manner of Charles, without the elastic cord; the incision being begun below and the vessels secured as the incision is extended.

17. **Gastroenterostomy for Benign Stricture of Pylorus.**—Nine cases, all males, are cited by Wanless. His treatment is as follows: In all cases in which stricture is suspected the patients are ordered lavage of the stomach morning and evening, with from four to eight pints of hot water at a temperature increasing from 105 to 115 F. Alkalies at intervals after meals, or an acid tonic, with pepsin, etc., with meals, combined with suitable laxatives and a light diet, are tried for a week, and in some instances for a longer period at the patient's request; if these measures fail to give steady and marked relief, operation is advised. The patient is prepared by a light diet for two or three days, free purgation, a cardiac tonic of strychnin and digitalis, and lavage twice daily, with sterile water or a weak boric acid solution. The teeth should be brushed with a mild antiseptic and the mouth rinsed several times a day with boric lotion. The abdomen and chest are prepared in the usual manner for abdominal section. Early on the morning of the operation the patient is given eight or ten ounces of broth or beef tea, and a soap and water enema given two hours later. The stomach is then washed out with weak boric lotion, and this is repeated before bringing the patient to the table. Strychnia gr. 1/40, atropin gr. 1/100 and morphin gr. 1/4 are usually given hypodermically half an hour before operation. The limbs and lower abdomen and buttocks are covered with flannel and hot water bottles are placed about them on the table. The

stomach is exposed through a three or four inch median incision, beginning from one inch to an inch and a half below the ensiform cartilage. The stomach is first brought into the wound and examined. Gatsroenterostomy having been decided on, the question of choice between the anterior and posterior operation must be immediately determined. In nine cases the posterior operation was done in eight, and the anterior in one. The posterior operation should be chosen in all cases except when the anterior wall of the stomach, by dilatation or displacement, appears to occupy a point anatomically lower than the first portion of the duodenum; or in which the mesenteric vessels in the mesocolon appear to be so large or so numerous that the making of an opening in it by blunt dissection is likely to be attended by troublesome hemorrhage, in which case the anterior operation, though not anatomically so ideal, should be chosen rather than to incur the risk of primary or secondary hemorrhage. Besides, if a large vessel in the mesentery is torn and ligated, the vitality of a corresponding section of the colon may be impaired. In none of the nine cases was the condition of the mesenteric vessels such as to contraindicate the posterior operation. The von Hacker method was used in seven of the cases. Fine silk or celluloid thread and an ordinary straight, round sewing needle were used. In eight of the nine cases the abdominal wound was closed by tier sutures. Wanless has been in the habit of using for the fascia mattress sutures of fine silk and coarse chromicized catgut alternately placed, the peritoneum being sutured in the ordinary manner with a running catgut suture, and the skin with interrupted silkworm gut. He has found it best to use a small cigarette gauze drain in the lower end of the incision, and this is removed in from twenty-four to forty-eight hours. The wound is dressed in the ordinary manner. The plan of feeding is as follows: Every six hours nutritive enemata for the first three or four days; if the bowels are loose, each enemata is preceded by a dose of 15 drops of laudanum injected into the rectum fifteen minutes before the enema is given; by the mouth, sterile water, in dram doses, every half-hour for first twenty-four hours, thereafter barley water in two-dram doses every hour for twenty-four hours, and increased to an ounce every two hours on the third day. Chicken broth or peptonized milk may be given alternately with the barley water, and on the fourth day clear soup broths and peptonized milk, two or three ounces every three hours may be allowed, and on the fifth day the quantity doubled at four-hour intervals. By the seventh day sago may be allowed; on the eighth, rice; by the tenth day bread may be permitted, and thereafter ordinary food. In some cases of great weakness essence of chicken or broth may be allowed after the first twenty-four hours, a dram at half-hour intervals.

## Annales des Mal. Génito-urinaires, Paris.

*Last indexed XLIV, page 831.*

21 (XXII, No. 22.) Les variations de la virulence et la chirurgie urinaire. F. Guyon.
22 Report of French Congress of Urology, 1904. (Commenced in No. 21.)
23 (No. 23.) Rôle des glandes de l'urèthre dans les suppurations périnéales. J. Escat (Marseilles).
24 *Description, fonctionnement et avantages du cloisonneur vésical gradué (urine segregator). E. Boddaert (Ghent).
25 (No. 24.) Sur la pathogénie des kystes dermoïdes de l'ovaire et du testicule. A. Pappa.
26 Corps étrangers de la vessie (foreign bodies in bladder). A. Pappa.
27 Fixateur pour sondes à demeure (Contrivance to hold permanent catheter in urethra). L. Ferria (Turin).
28 (XXIII, No. 1.) Des rétrécissements inflammatoires de l'urèthre postérieur (strictures). R. Le Fur.
29 Hypospadias balano-pénien. A. Broca.
30 (No. 2.) Dosage de l'uree. Meillère.
31 Les kystes hydatiques pelviens. F. Guyon.
32 (No. 3.) *De la chloroformisation de la vessie (of bladder). F. Guyon.
33 Length of Male Urethra.—Sur la longueur de l'urètre chez l'homme. P. Bazy and M. Deschamps.
34 *Procédé de néphrectomie pour cancer. R. Grégoire.
35 (No. 4.) Anatomie du trigone vésical. R. Uteau.
36 Diet Without Salt.—La pratique du regime déchloruré. Achard.
37 *Separation intravésicale des urines. G. Luys. Id. F. Cathelin. (Commenced in No. 2.)

24 and 37. **Separation Within the Bladder of Urine from Each Kidney.**—Luys describes and illustrates his instrument and also those of others devised for the same purpose, citing the various experiences with the segregators. Those of Cathelin and Boddaert are graduated. The principle of these three is the formation of a dividing wall in the bladder by a flat bag of fine rubber tissue drawn out into shape, after the instrument has been introduced, by a chain or hoop emerging from the body of the instrument.

32. **Effect of Anesthetics on the Bladder.**—Guyon discusses the sensibility of the bladder in health and in disease. In health the sensibility to distension is scarcely modified by chloroform anesthesia, and in morbid conditions it is not modified at all. The sense of contact, however, is entirely abolished by the chloroform. The moment the bladder begins to feel it begins to contract. In operating on the bladder, the depth of the anesthesia can be regulated to its degree of sensibility. If very sensitive, supplementary morphin may be needed, while in the non-sensitive cases a very little chloroform will suffice. In operating on the bladder, therefore, a few days of preliminary treatment of cystitis, etc., will reduce the sensibility and thus allow surgical intervention with a surprisingly small amount of chloroform. Distension of the bladder should be scrupulously avoided both before and during the operation. The symptoms of returning sensibility are readily apparent in the exposed bladder. The wall stretches and loses its suppleness; the field of the operation changes its shape and grows smaller; the play of the instruments is hindered. A few more drops of chloroform and these symptoms of returning sensitiveness subside.

34. **Nephrectomy for Cancer.**—Grégoire's technic allows the removal of the kidney without opening its adipose capsule, and with it removes the suprarenals, the lmphatics and ganglia. A block of wood raises the lumbar region, and the incision outlines a flap, starting from an extension of the anterior axillary line from the costal arch to the iliac crest. The upper end of the incision curves along the edge of the thorax for from 4 to 5 cm., and the lower end follows Poupart's ligament for the same distance or more. The organs within can be drawn up and out, leaving the muscular background entirely free. After the kidney has been detached with the fingers all around, the pedicle is ligated, and the operation is easily completed. Oversight is more extensive than with a lumbar incision and the ablation can be more radical. Experiences on the cadaver and in two cases in the clinic, he thinks, have fully established the superiority of this technic.

## Bulletin de l'Académie de Médecine, Paris.

38 (Year XLIX, No. 23.) Influence of Salt-Containing Waters and Infestation of Mines by Larvæ of Anklostomata.—Eaux salées de filtration rendant certains mines de houille refractaires, etc. Manouvriez (Valenciennes).
39 *Tuberculose inflammatoire, ses localisations multiples, en particulier sur l'estomac, l'intestin, etc. A. Poncet and R. Leriche.

38. **Destructive Action of Salt Water on Larvae of Ankylostomata.**—Manouvriez shows by numerous examples that mines fed with sea water or with a saline mineral water are exempt from ankylostomiasis, although the conditions otherwise favor infection. He has found that even as small a proportion as 2 per cent. salt effectually preserves mines from infestation and the miners from ankylostomiasis. He suggests that salt might be scattered around or a water containing 2 per cent. salt used for irrigating, and thus destroy the larvæ much more easily and inexpensively than measures directed against the mature parasite.

39. **Inflammatory Tuberculosis.**—Poncet has long proclaimed that, besides the classic histologic process of tuberculosis, the disease is liable to take the form of rheumatism, with a plastic tendency. This is merely a special localization of a more general process, inflammatory in nature, which is the result of the toxins of the tubercle bacillus inducing an active proliferation of connective tissue. The lack of any specific lesion has caused these inflammatory tuberculous lesions to be overlooked. The researches of the last two or three years have demonstrated that other agents are liable to cause the production of the so-called tuberculous follicle, while, on the other hand, the tubercle bacillus is liable, by its mere presence, to induce the ordinary lesions of common inflammation. He

discusses those observed in the stomach and in the intestines. Tuberculosis of the stomach may assume the ulcerative or hypertrophic form or the fibrous form from the start. These false tumors generally occupy the pyloric region, and are distinguished by infiltration of the submucous coat, with thickening and fibrous organization of the connective tissue. The mucosa is intact, and the peritoneal reaction may be slight or intense. This simple hypertrophic submucous sclerosis has been noted in tuberculous cadavers, but has not been attributed to its true cause hitherto, although it has frequently been described in the autopsy findings. Similar lesions occur in the intestines, breast, thyroid and elsewhere, and he suggests the term "inflammatory tuberculosis" as best describing its characteristics. The entire absence of tuberculous follicles and of giant cells does not contradict this assumption, in his opinion.

### Revue de Médecine, Paris.

*Last indexed XLIV, page 77.*

40 (XXIV, No. 11.) Sur le diagnostic des abcès du foie (of liver). H. de Brun.
41 Etude de la rupture spontanée de l'aorte. Tolot and Sarvonat.
42 *Etude de la polymyosite. Preobrazhenski and Margulies. (Commenced in No. 10.)
43 Ferments solubles, toxins, toxalbumines, anticorps, antitoxines, alexines, cytases. A. Chassevant.
44 (No. 12.) La maladie de Banti, existe-t-elle? A. Gilbert and P. Lereboullet.
45 *De l'accélération et du ralentissement du pouls per numération accélérée et ralentie à haute voix (influence on pulse of slow and rapid counting). Bernheim (Nancy).
46 Gangrène multiple spontanée de la peau (of skin). M. Truffi.
47 *Sur l'origine organique des certaines phobies. P. Hartenberg.
48 *Des affections syphilitiques du coeur (of heart). J. Cecikas (Bucharest).
49 (XXV, No. 1.) Alimentation des chiens tuberculeux (dogs). C. Richet.
50 Nouvel essai de cardiographie clinique. A. d'Espine (Geneva).
51 Tuberculose expérimentale du coeur (of heart). L. Bernard and M. Salomon.
52 Sur un nouveau syndrome clinique d'origine très probablement paludique: "le chloropaludisme." Sakorrhaphos (Athens).

42. **Polymyositis.**—A case is described in detail, with the autopsy findings. The patient was a woman of 25, and the affection terminated in respiratory paralysis in about nine months. The first symptoms were noted after prolonged exposure to cold. The pains in the muscles occurred spontaneously and could also be elicited on pressure. The muscles were weak and emaciated. The flexors of the fingers were contracted in both hands. The kneejerk was weak, and the arm reflexes were all lacking. The heart action was irregular and intermittent, with small pulse, low pressure, and profuse sweats. There were no specific characteristic changes found in the muscles.

45. **Changes in Pulse When It Is Counted Aloud.**—Bernheim gives tracings to sustain his statements that if one counts the pulse of another person aloud, and hastens the counting so as to make it faster than the pulse really is beating, the pulse will become accelerated to correspond. The rate increases from 6 to 15 beats a minute. The increase is only about half this when the arterial pressure is above normal. It commences about the fortieth second and reaches its maximum from the second to the third minute in case of normal pressure. With hypertension the effect is not apparent for about three minutes, but persists longer. When the counting is slower than the pulse, the latter is retarded to correspond. These phenomena demonstrate, he thinks, that suggestion is able to act on the automatic functions without the intermediation of the will.

47. **Organic Origin of Certain Phobias.**—A woman complained of severe vertigo whenever she crossed a bridge, looked down from a height or rowed in a boat. There were also "palpitations" and emotional distress. Hartenberg concluded, after observing one of the attacks, that there was no real vertigo, but merely the fear of having it. The "palpitations" were the primal cause. They suggested impending vertigo, and drugs to reduce the excitability of the heart, with a little hydrotherapy and lighter diet, soon banished the "palpitations" and with them all traces of the phobia. An organic cause can be found for every phobia, he thinks, if persistently sought for.

48. **Syphilitic Affections of the Heart.**—Cecikas draws the clinical picture from eleven cases and emphasizes the necessity for prompt, vigorous and persevering mercurial treatment.

### Semaine Médicale, Paris.

53 (XXV, No. 23.) Proceedings of International Congress on Accidents to Working Men.—Les accidents de travail au point de vue médical. H. Le Meignen. See foreign news columns on page 1995 of last volume.
54 L'épidémie actuelle de méningite cérébro-spinale dans l'Europe centrale.

### Berliner klinische Wochenschrift.

55 (XLII, No. 20. May 15.) Die Balneotherapie in der Nervenheilkunde (in nervous affections). A. Eulenburg.
56 Ueber die Combination von Excisions- und Roentgen-Therapie bei der Morbus Basedowii. C. Beck (New York).
57 Dr. Paskal Josef v. Ferro, ein Hydrotherapeut des XVIII Jahrhunderts (century). R. Bassenge.
58 *Die Verwertung der Hydrotherapie in der Behandlung der Herzkrankheiten. S. Munter (Berlin).
59 Changes in Nails After Acute Infections.—Nagelveränderungen nach akuten Krankheiten. Eger.
60 Mechanismus der Antiamboceptor-Wirkung. P. Ehrlich and H. Sachs. (Commenced in No. 19.)
61 Address at Dedication of Berlin Institute of Hygiene. M. Rubner.
62 *Epidemiologie der Tuberkulose. Kutscher.
63 *Hydro-Dilator zur Extraktion von Fremdkörpern aus der Speiseröhre (foreign bodies in esophagus). P. Bakaleinik (Kiev).

58. **Hydrotherapy in Heart Affections.**—Munter is convinced that with hydrotherapy we are able scientifically to control and to guide the natural curative powers of the organism. In nervous heart affections, the torpid cases require stimulating, and the overexcited ones soothing measures. An important differential sign in nervous heart affection is increased desire to urinate with increased output of urine. This indicates good functional capacity on the part of the heart, and excludes an organic lesion. On the other hand, an organic heart affection is generally associated with a sensation of distension in the abdomen with desire to defecate, which is probably due to congestion in the abdomen.

62. **Epidemiology of Tuberculosis.**—Kutscher analyses articles on this subject published within late years in Turkey, Greenland, Japan and elsewhere. Breast feeding of infants is universal in these countries, and yet the proportion of tuberculous is as large or larger than in Europe. This, he thinks, disproves von Behring's statements in regard to the importance of cow's milk in infant feeding for the etiology of tuberculosis.

63. **Water Bag for Extraction of Foreign Bodies in Esophagus.**—Bakaleinik's "hydro-dilator" has been mentioned previously in these columns. He has found it very useful for extraction of foreign bodies in the esophagus. The apparatus consists of an air pump connected with a rubber tube closed at the farther end. About 8 cm. from the closed end of the tube a dilatable bag of thin rubber is introduced in the tube. The tube and the collapsed bag are inserted in the esophagus and the bag is then inflated with the air pump, forming a soft, flexible, round ball. It distends the walls and thus loosens an impacted foreign body and pushes it along ahead of it as the tube is withdrawn, until the foreign body can be seized and extracted from above.

### Dermatologische Zeitschrift, Berlin.

*Last indexed XLIV, page 78.*

64 (XI, No. 12.) *Beiträge zur Pathologie der Tuberkulide im Kindesalter (in children). G. Nobl (Vienna).
65 Blutveränderungen bei "Pemphigus follaceus" Cazenavi (blood changes in). G. Grinew (Charkow).
66 *Morbid Changes in Urine in Secondary Syphilis and Under Mercurial Treatment.—Ueber die krankhaften Veränderungen des Urins bei sekundärer Syphilis und Quecksilberkuren. E. Adler.
67 (XII, No. 1.) *Protozoa in Focal Affections of Inherited Syphilis.—Ueber hereditär-syphilitische Herderkrankungen bei Kindern und die Verbreitung der protozoischen Parasiten in derselben. Max Schüller (Berlin).
68 Spontane Involution eines Riesen-Naevus. L. Spitzer.
69 *Rotations-Instrumente. Kromayer (Berlin).
70 Ueber Eucalyptus-Dermatitiden. Galewsky (Dresden).
71 Ueber Behandlung des Lupus vulgaris der Haut und Schleimhaut durch hoch-frequente Funkenentladungen (high frequency spark discharges). H. Strebel.
72 (No. 2.) *Kombination von Psychose und Hautkrankheit (cutaneous affection). Raschkow.
73 Thrombophlebitis gonorrhoica. Voss.
74 Ueber Pseudoalopecia atrophicans crustosa. W. Wechselmann (Berlin).
75 Correspondence with Finsen in Regard to Phototherapy.—Gedankenaustausch mit Professor Niels R. Finsen über Lichttherapie. H. Strebel (Munich).
76 (No. 3.) Anatomie der Dermatitis papillaris Capillitii (Kaposi). J. Guszman (Budapest).

77 (No. 4.) Cutaneous Linear Cicatrices of Inherited Syphilis.—Ueber die linienförmigen Narben bei der her. Syphilis. F. Poor (Budapest).
78 Lichen planus zoniformis. F. Pinkus.
79 Tuberculosis of Parrot Tongue.—Zur Zungentuberkulose der Papageien. E. Delbanco.
80 (No. 5.) *Ueber Arsenvergiftung auf Grund einer mikrochemisch histologischen Methode (arsenic poisoning test). J. Justus (Budapest).
81 Ueber die Pagetsche Krankheit (Paget's disease of the nipple). M. A. Tschlenoff (Moscow). (Commenced in No. 2.)

64. **Tuberculids in Children.**—Nobl noticed a papulo-necrotic exanthema in 13 out of 430 children with some cutaneous affection. He gives a detailed description of each, arguing that they belong in the category of specific tuberculous cutaneous processes. The lesions did not show any special reaction to tuberculin, and seldom displayed the slightest influence from it. No tubercle bacilli were found in any of the lesions. He explains these negative findings as not contradicting the tuberculous nature of the processes, for reasons which he enumerates.

66. **The Urine in Secondary Syphilis and Under Mercurial Treatment.**—All the syphilitics in Ledermann's practice at Berlin have their urine examined before, during and after treatment. By this means he has been able to detect a number of cases of syphilitic nephritis and also of irritation of the kidney from the mercurial treatment. Those in the first class were cured by the mercury, while those in the second were aggravated by it. The latter category includes 31 of mercurial albuminuria, which is a proportion of about 5 per cent. of all the syphilitics taking mercurial treatment. The particulars of the various cases are tabulated. The albuminuria promptly subsided on suspension of the drug. In the two cases of actual nephritis described, the onset of the albuminuria coincided with the appearance of the roseola.

67. **Schüller's Parasites in Inherited Syphilis.**—Since 1899 Schüller has had opportunity to examine a large number of children with lesions of inherited syphilis. Careful records were kept of 62, all but 21 of whom were less than a year old. The protozoon-like parasites which he has previously described were never found in the pemphigus lesions of any of these children, but they were invariably present in abscesses, irrespective of whether the suppuration was in the skin, muscle, periosteum, mammary gland or elsewhere. Local recurrences of the morbid process are due to the growth of new colonies from the walls of the former focus. The minute spores of the parasite grow into the crevices and spaces of the adjacent bone, and carious destruction follows the granulating gummatous process. This was observed frequently in children with a syphilitic heritage. The various phases of the growth of the parasite are illustrated, and Schüller relates that these phases harmonize remarkably with the clinical picture and its variations. Suppuration of syphilitic lesions is more common in young children than in adults, possibly owing to the more numerous chances for secondary hematogenic infection.

69. **Small Drills in Dermatology.**—Kromayer's small circular knives or punches, driven by a foot motor, for use in epilation, were mentioned in THE JOURNAL, page 1074 of the last volume. They are indicated likewise, he says, for opening small abscesses and to stimulate absorption in rebellious pathologic processes, as, for instance, in obstinate syphilides, etc. Some of the drills or punches are similar to those used by dentists. They have proved very useful for excision of warts, nevi and pigmented patches in which the derma must be respected and the excision done above it to refrain from leaving a scar. This is accomplished by applying the punch through a hole of the same size in a thin metal plate. By pressing on the plate, the disc of skin outlined by the cutting edge of the punch protrudes into the hole in the plate. A sickel-shaped knife is then used to slice off this protruding disc of epidermis, not touching the derma below. The defect left heals without leaving a trace, as is always the case, he says, when the derma is intact. Kromayer also uses a drill and fraise in dermatologic work, borrowed from the dentists. He thinks that they have all the advantages, and more, of the curette without its drawbacks. An anesthetic is seldom required. He has punched out over 200 hairs or 300 acne points at a single sitting, without objections from the patients. In other cases, he uses the Schleich infiltration method or ethyl chlorid for local anesthesia.

72. **Combination of Psychosis and Cutaneous Affection.**—Raschkow reviews the dozen or more published cases of this association of a mental with a cutaneous affection, and reports another in a woman of 44. She had long suffered from migraine, but had no morbid heritage. After a period of overwork, a confusional psychosis developed, with hallucinations and anguish. During a phase in which the anguish sensation had nearly subsided, her face became congested and severe acne rosacea developed. The exacerbations of the mental and of the cutaneous affections alternated, one subsiding as the other increased in intensity. This alternation was marked several times until both affections permanently vanished.

80. **Test for Arsenic Poisoning.**—Justus has been studying the possibility of detecting arsenic in the tissues with the microscope, and the technic best adapted for the purpose. By transforming the arsenic in the tissues into arsenic trisulphid, a striking reaction can be obtained with it even in a very thin layer; the color is characteristic, and the localization of the substance in the tissues shows the distribution of the arsenic and throws light on its functions. Arsenic is transformed into the trisulphid by passing sulphuretted hydrogen through its solution. The characteristic odor is lost at once, and the fluid turns yellow. A yellow precipitate is thrown down by long standing or by addition of a concentrated solution of HCl, NaCl or $AlCl_3$. This yellow precipitate is arsenic trisulphid, and the greenish yellow crystals are readily recognized under the microscope. In examining tissues for arsenic, they are first fixed in 4 per cent. formalin for a day or so, then rinsed, cut into very thin sections, and placed in a fresh, neutral solution of sulphuretted hydrogen for three or four days at a temperature of from 60 to 80 C.; they are then rinsed with alcohol and embedded in celloidin. The sections are then placed for from ten to twenty minutes in a 5 to 10 solution of hydrochloric acid to dissolve out the iron sulphid, and then rinsed several times, after which they are stained, cleared up in carbol xylol and mounted in balsam. On applying this test for arsenic in experimental research it was found that arsenic injected subcutaneously combined first with the plasma of the red corpuscles. This technic readily revealed its presence here and in the various organs, in the epithelium of kidneys and intestines, and especially in the muscle and liver cells, sweat glands, stratum corneum and hairs.

### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

82 (XXXI, No. 20.) *Prognose und Therapie der Albuminurie. Fürbringer.
83 *Karlsbad oder Kissingen? I. Boas (Berlin).
84 Ueber jugendliche Paralyse (juvenile). H. Vogt and O. Franck.
85 *Zur Behandlung der epidemischen Meningitis. C. França (Lisbon).
86 Spirochetes in Syphilitic Infant.—Vorkommen von Spirochäten in inneren Organen eines syph. Kindes. A. Buschke and W. Fischer.
87 *Artificial Respiration.—Ueber künstliche Atmung. G. Herter.
88 *Non-operative Treatment of Angioma.—Operationslose Behandlung der Angiome. M. Neumann.
89 Zur faradischen Behandlung der Fibromyome des Uterus. Witte.
90 Die Sublimat-Hände-Desinfektion des neuen preussischen Hebammenlehrbuchs (in new manual for midwives). F. Ahlfeld. Id. H. Fehling.

82. **Prognosis and Treatment of Albuminuria.**—Fürbringer remarks that dietetic treatment of nephritic albuminuria is more important than physical measures, while medicine is of comparatively slight benefit except against the underlying cause. Cyclic albuminuria, he believes, is always of pathologic origin, and may be the manifestation of an insidious nephritis. When this can be excluded, physical measures will be found the best means of restoring conditions to normal. Strengthening the heart by muscular exercise is useful if overexertion be avoided. He prefers cold and tepid to hot baths, but the proper reaction with warmth and rewarming of the surface must be obtained or they do more harm than good. One of the principal benefits of the cold baths is the stimulation of the appetite. The clothing must protect thoroughly against cold and dampness. Massage and elastic compression of the legs never did any good in his experience. The diet in nephritic albuminu-

ria should seek to compensate the losses of albumin. Cooked eggs, meat, both dark and light, fish, and vegetable albumin should be taken in abundance. Milk is less a strengthener of the heart than meat, and its frequent drawbacks of dyspepsia and urinary and intestinal disturbances have dethroned it from its former exalted position, although the absence of elements that irritate the kidney and its "rinsing" properties theoretically rank it above meat. The more varied the combinations of the above articles of diet, the better and stronger the patient will feel. The fear of increasing the albuminuria by the copious intake of albumin will be found to have no basis in fact.

83. **Carlsbad or Kissingen?**—Boas emphasizes the fact that no patient with vague symptoms should be sent to any special watering place. Only the clearly defined cases afford indications that enable balneologic measures to be prudently and successfully applied. Too often the cases of vague, chronic gastrointestinal catarrh cast off their mask and disclose their cancerous nature immediately after a course of mineral waters. He reviews his twenty years of experience with gastrointestinal affections under balneologic treatment, and formulates from empiric observation the indications for the various thermal waters. He has scarcely ever noted any benefit from them in cases of motor disturbances in stomach or intestines. Large amounts of mineral waters actually increase the subjective discomfort. In "stagnation insufficiency" of the second degree, as also in all forms of "psychogenic" dyspepsia, courses of mineral waters are absolutely contraindicated. The salol or iodipin tests will generally inform the physician in regard to the gastric motor functions without resort to the stomach tube. "Psychogenic" dyspepsia frequently accompanies organic affections, and it may be wise to try a preliminary course of mineral waters at home to learn whether or not the case will improve under a course at Carlsbad or elsewhere. Only when the water is well tolerated in the preliminary course is a continuance advisable. None of the mineral waters have any permanent effect on merely nervous intestinal affections. He has never known of a case of membranous enteritis cured by a course of mineral waters.

85. **Epidemic Cerebrospinal Meningitis.**—Franca relates that during the epidemic of cerebrospinal meningitis in Lisbon, in 1902, the mortality of 47 cases in which the patients were treated by lumbar puncture alone was over 63 per cent. In 9 patients treated by lumbar puncture and injection of mercury cyanate it was over 66 per cent., while it was only 29.3 per cent. in 58 treated by lumbar puncture and injection of a 1 per cent. solution of lysol. He withdrew from 25 to 50 c.c. of the cerebrospinal fluid and injected from 3 to 9 c.c. of the lysol solution in children, and from 12 to 18 c.c. in adults. The injections were repeated once a day until the fluid was found to be sterile, usually only a question of a few days. With this method of treatment, no recurrences were observed; the duration of the sickness was much shortened, and the diplococci rapidly disappeared from the cerebrospinal fluid. The germs sometimes persisted for months in the cerebrospinal fluid of patients treated by other technics. The patients treated with the lysol were further distinguished by the lack of emaciation and of severe trophic disturbances, and by the much smaller proportion of consecutive mental disturbances, paralyses, etc.

87. **Artificial Respiration.**—Herter recommends a combination of the Marshall Hall, Sylvester, Howard and Brosch methods of artificial respiration, which he describes in detail, laying special stress on the importance of keeping the tongue drawn out of the mouth. The ideal method is to seize the tongue with Pean forceps and draw it out of the mouth, letting it hang down on one side, the forceps fastened to the body by a band passed around the head. If forceps are not at hand, one person must hold with his fingers the tip of the tongue in the corner of a handkerchief. A person kneeling at the head of the subject should devote his entire attention to the tongue, while counting aloud his own breathing rate. An aid on each side makes the Sylvester movements for the arms, while the fourth aid, kneeling astride of the subject, makes the Howard movements, not removing his hands during the intervals, but merely suspending pressure with them, carefully avoiding any pressure of the abdomen that might force stomach contents into the throat, with consequent aspiration. This danger is a real one; aspiration is rendered less imminent by having the head low. If only three assistants are at hand, the one kneeling astride must take charge of the tongue, as well as of the Howard movements, and if there are only two, one must make the Sylvester movements for both arms. If only one is present, the arm movements should not be attempted, and the assistance should be restricted to holding the tongue and the Howard movements.

88. **Bloodless Treatment of Angiomata.**—Neumann gives illustrations of 2 out of 700 cases he has treated during the last five years with eminently favorable results. He applies an emulsion of from 5 to 10 parts of zinc chlorid in collodion to 100 parts. A piece of adhesive plaster is first placed over the angioma, with a hole corresponding to the lesion, but somewhat smaller, as the action of the chlorid extends a little way under the edges of the plaster. This dressing is removed the next or on the second day, and the lesion cleansed and left to nature under a fresh, merely protecting, dressing. The defect usually heals rapidly, sometimes in a week. If relics of the angioma still persist, he applies an ointment containing arsenous acid and sulphur, each 4 parts with unguentum cerei to 100 parts. The sound parts are protected with fenestrated gauze, and this paste is applied on another piece of gauze. In two or three days this dressing should be removed. Zinc chlorid in the above dosage has no toxic action, and no absorption need be feared, even on an area of 30 or 40 square cm., but the arsenous acid is liable to cause toxic accidents. When possible, he substitutes parenchymatous injection of zinc chlorid. The latter alone is sometimes successful in curing certain cases, for example, an extensive angioma of the upper lip was cured by this means.

### Deutsche Zeitschrift f. Chirurgie, Leipsic.

*Last indexed XLIV, page 1232.*

91 (LXXVI, No. 1.) Hemophilia Through Four Generations.—Die Bluterfamilie Mampel in Kirchheim bei Heidelberg. H. Lossen.

92 Zur Pathogenese und Radikaloperation der grossen Mastdarmvorfälle (large rectal prolapse). D. Wenzel.

93 *Ueber den therapeutischen Ureter-Katheterismus. G. v. Illyes.

94 Experimentelle und histologische Beiträge zur Anatomie und Pathologie des Gelenkknorpels (joint cartilage). R. Seggel.

95 Eight Cases of Plastic Restoration of Entire Lower Lip.—Cheiloplastik bei totalem Verluste der Unterlippe. Eine Kombination der Morganschen Visierplastik mit Schultens Schleimhaut-Muskelplastik. E. Sandelin.

93. **Therapeutic Catheterization of the Ureters.**—Seven cases of suppuration in the kidney pelvis or in the ureter were treated by catheterization of the ureter. It promptly evacuated the pus and allowed the pelvis to be thoroughly rinsed after nephrotomy in some of the cases. More or less benefit was derived in every instance. Illyes remarks that the harmlessness and simplicity of this method of treating kidney affections should commend it for more general use. It may cure entirely or at least relieve some serious symptom. The above cases are reported from Dollinger's clinic at Budapest. The patients were from 21 to 56 years of age, and the primary cause of the trouble had been a kidney stone in most cases. In others there was ectopia of the bladder or ascending pyonephrosis.

### Jahrbuch f. Kinderheilkunde, Berlin.

*Last indexed XLIV, page 1569.*

96 (LIX, No. 4.) Zur Bakteriologie des Entero-Katarrhs. B. Salge.

97 *Water and Salts in Relation to Fluctuations of Infants' Weight.—Wasser und Salze in ihren Beziehung zu den Körpergewichtsschwankungen der Säuglinge. W. Freund (Breslau).

98 Influence of Nutritional Disturbances on Chemical Composition of Infant's Body.—Einfluss von Ernährungsstörungen auf die chem. Zusammensetzung des Säuglingskörpers. F. Steinitz.

99 *Clabbered Milk for Sick Infants.—Erfahrungen mit gelabter Kuhmilch in der Ernährungstherapie kranker Säuglinge. Reinach.

100 (No. 5.) Temperature of Infants at Night.—Ueber die nykthemeralen Temperatur-Schwankungen im ersten Lebensjahre des Menschen. I. Jundell (Stockholm).

101 Einfluss der Serum-Behandlung auf die Diphtherie-Mortalität. E. E. Faber (Copenhagen).

102 Ueber Masern-Scarlach-Fälle (measles-scarlet fever cases). B. Hukiewicz.

103 (No. 6.) *Ueber Rubeolæ und Doppel-Exantheme. D. Popischill (Vienna).
104 2 Fälle von Influenza-Bazillus-Meningitis. I. Jundell.
105 (LX, No. 1.) Passage of Antitoxin Through Intestinal Wall in Infants.—Ueber den Durchtritt von Antitoxin durch die Darmwand des menschlichen Säuglings. B. Salge.
106 Mucous Formation in Stomach Before and After Birth.—Ausdehnung der Schleimbildung in den Magenepithelium des Menschen vor und nach der Geburt. P. Reyher.
107 Blutbefunde bei Chorea minor und Tic convulsif (blood findings). Schaps.
108 Zur Vererbung der Syphilis (inheritance of). Misch.

97. **Retention of Water and Salts in Relation to Weight of Infants.**—Freund's extensive research, he thinks, has established the fact that the sudden large increase in weight sometimes noticed in infants is due to retention of water. It occurs only in pathologic conditions and seems to be connected with processes of repair. Nothing of the kind was observed in breast-fed infants. He advances a theory to explain various features in the metabolism and the localization of the water in the organism. Certain infants take on fat at the same time as they retain water, while others retain smaller amounts of water to substitute fat consumed in undue amounts.

99. **Clabbered Milk for Sick Infants.**—Reinach gives the detailed histories of 44 out of 51 sick infants whom he has been feeding with "junket." The milk is artificially clabbered with lab ferment, according to von Dungern's directions. The clots are much finer than from ordinary milk. The results in the chronic cases scarcely surpassed those obtained with ordinary milk, but in acute gastrointestinal troubles the results were much better. Vomiting and restlessness after eating ceased after substitution of the clabbered milk in many of the cases, as also symptoms of irritation on the part of the central nervous system.

103. **Rubeola and Double Exanthemata.**—Pospischill discusses the differential diagnosis of measles with an abnormal course. The red cheeks of rubeola are characteristic, as also the features of the exanthema, which he describes in detail. He further describes 2 cases of simultaneous rubeola and scarlet fever, calling attention to the confluence, beet-like consistency and brick-red color when scarlet fever complicates any of these eruptive diseases. These findings are characteristic long before any scarlatinal exanthem has become visible. When scarlet fever is superposed on fresh measles the exanthema resembles neither typical measles nor the scarlatinal eruption. Experience apparently shows that the commencement of the measles eruption increases the predisposition to scarlet fever and varicella has a similar effect. In one of his cases, the child had a mild scarlet fever during an attack of rubeola, with a second, severer recurrence of the scarlet fever in less than a month, accompanying the outbreak of true measles. The association of two eruptive diseases is much more frequent than generally recognized. He is convinced that the overwhelming majority of streptococcus general infections in cases of measles and varicella are due invariably to secondary infection from septic scarlet fever. The acute hemorrhagic nephritis which sometimes follows the eruptive diseases is unmistakably the result of scarlet-fever infection. Children convalescing from scarlet fever should be isolated from fresh cases of scarlet fever, and children who have received serum treatment should be kept away from fresh cases of scarlet fever until after the ninth day.

### Monatsschrift f. Geb. u. Gynäkologie, Berlin.

*Last indexed XLIV, page 1650.*

109 (XXI, No. 5.) Examination of Incipient Hydatidiform Mole.—Untersuchung-sergebnis einer Blasenmole im Frühstadium. A. Stoffel.
110 Ueber chorioepitheliomartige Wucherungen in Hodenteratomen (in teratoma in testicle). R. Emanuel.
111 Follicles with Several Ova and Mononucleated Ovum Cells.—Ueber mehreilge Follikel und mehrkernige Eizellen. J. Schottlaender.
112 Beitrag zur abdominalen Radikal-Operation des carzinomatösen Uterus. R. Lampe.

### Virchow's Archiv, Berlin.

*Last indexed, XLIV, page 1971.*

113 (CLXXIX, No. 1.) Descending Degeneration of Posterior Columns.—Ueber absteigende Hinterstrangdegeneration. S. Matuszewski.
114 Senile Flattening of the Trachea.—Ueber Alterssäbelscheidentrachea. M. Simmonds.
115 *Experimental Production of Lymphocyte Exudates.—Ueber experimentelle Erzeugung von Lymphozytenexsudaten. Fr. Proscher.
116 Changes in Muscles Where Snake Venom Is Injected.—Pathologisch-histologische Veränderungen der quergestreiften Muskeln an der Injektionsstelle des Schlangiftes. G. P. Zeliony.
117 Islands of Gastric Mucosa in Esophagus.—Ueber die Schafferschen Magenschleimhautinseln der Speiseröhre. K. Schwalbe.
118 Zur Kenntnis der Mamma-Cysten mit butter-ähnlichem Inhalt. L. Samelson-Kilwansky.
119 Ueber das Adenocarcinom und Adenom der Leber (of liver). K. Wegelin.
120 Ueber die Entkapselung der Niere (decapsulation of kidney). G. Herxheimer.
121 (No. 2.) *Ultramikroskopische Untersuchungen. L. Michaelis.
122 Cell Forms in Rabbit Omentum.—Ueber die im grossen Netz des Kaninchens vorkommende Zelfiformen. G. Schwarz.
123 *Inhalation of Bacilli.—Ueber Bazilleneinatmung. M. Saenger.
124 Zur Entstehung der akuten allgemeinen Miliar-Tuberkulose. H. Silbergleit.
125 Plague at Manila.—Ueber latente und ambulatorische Pest. M. Herzog (Manila).
126 Zur pathologischen Anatomie der Gicht (gout). F. Rosenbach.
127 *Origin of Varices in Respect to Their Dependence on the Innervation of the Vascular Nervous System.—Entstehung der Varicen in Abhängigkeit vom Gefässnervensystem. S. Kashimura.

115. **Experimental Production of Lymphocyte Exudates.**—Proscher discovered, in the course of his studies on immunity to tuberculosis, a substance which induced an exudate, consisting almost exclusively of lymphocytes, when injected into guinea-pigs. This substance is derived from the intracellular toxin obtained from tubercle bacilli. When this was injected into the peritoneum of guinea-pigs, he was able to follow with the microscope the transformation of endothelium into mononuclear cells. This supplies, he states, the missing link in the testimony which demonstrates that the lymphocytes are formed out of the fixed tissue cells. It further throws light on the development of the tubercle.

121. **Ultramicroscope Researches.**—Michaelis' work was reviewed editorially on Page 1451 of the last volume of THE JOURNAL.

123. **Inhalation of Bacteria.**—The results of the experimental research described are summarized in the statements that nothing to date has absolutely demonstrated that bacilli make their way into the lungs exclusively or even almost exclusively by way of inhalation. The number of bacilli actually penetrating into the lungs by way of inhalation is incomparably smaller than the amount inhaled but caught along the walls of the upper air passages. On the other hand, everything tends to show that bacilli getting into the mouth and throat by way of the food or by inhalation or otherwise can find their way into the lymph stream and thus be swept to the lungs through the lymphatics.

127. **Origin of Varices.**—Kashinura presents evidence to sustain his assumption that the veins and the vasa vasorum stand under the direct influence of the nervous system. Their functioning is dependent on the supply of blood in the vessels in the walls of the veins, and this supply is under the control of the sympathetic nervous system. Abnormal irritation of the nerves of the vein musculature induces hyperplasia in time, with consequent hyperfunction on the part of the vein. When a period of abnormally low stimulation follows as the reaction to the overstimulation, the blood current slows down and a more or less permanent stasis hyperemia results. This entails, in time, the disappearance of true muscle fiber and an increase in the collagen fibers in the walls of the vein. A similar process is liable to occur in the heart musculature, and explains some of its pathology as well as the etiology of varices in the saphena.

### Gazzetta degli Ospedali, Milan.

*Last indexed XLIV, page 1891.*

128 (XXVI, No. 13. *Prognostic Importance of Leucocyte Formula in Cerebrospinal Fluid.—Valore prognostico, etc. C. P. Goggia.
129 Auscultation of the Mouth in Relation to Cardio-pulmonary Respiration.—Ascoltazione della bocca. G. Binetti.
130 *Sulla diagnosi dei tumori profundi del grande bacino (in pelvis). R. Cecca.
131 *Legatura della carotide esterna. A. Gaetano.
132 *Considerazione su alcune infezioni da piogeni. A. Balduzzi.
133 (No. 16.) Evolution of Tubercle Under Direct Action of Specific Antibacillary Serum.—Come evolve il tubercolo, etc. G. Ghedini (Maragliano's institute, Genoa).
134 2 casi di atrofia dell ottico conseguente a trauma del capo (optic atrophy after head injury). A. Carbona.
135 *Pathogenesi della tubercolosi polmonare e alla sua terapia specifica. Ferrer Piera (Barcelona).
136 *Sieroterapia dell' angina Ludwig. G. Pozzolo.

128. **Cerebrospinal Fluid in Meningitis.**—Goggia mentions the constant predominance of small mononuclear elements in the cerebrospinal fluid during diplococcus meningitis in two men. One died. As the other entered on convalescence, polynuclear elements became constantly predominant.

130. **Diagnosis of Retroperitoneal Tumors.**—Cecca calls attention to a sign of a deep-seated tumor in the retroperitoneal region corresponding to the iliac fossa. He has reproduced it on the cadaver by making an artificial tumor, and explains the mechanism producing it. The patient lies supine on a table (a bed is too soft for the purpose); the operator stands on the side of the supposed tumor. If on the right side, he places his left hand on the lower quadrant of the abdomen and tries to palpate the tumor. When he feels the mass, with the other hand he grasps the leg of the same side, held as stretched and rigid as possible, taking hold at about the lower third of the tibia. He first flexes it lightly on the pelvis and then abruptly draws it down until the heel touches the table. The knee must be kept rigid, without flexing, all the while. As the heel touches the plane surface, the hand on the pelvis feels a sudden impact, synchronous with the contact of the heel with the flat surface. This impact or ictus, as he calls it, is not felt in case of tumors situated elsewhere, while an experience of years has confirmed its constant presence when a tumor is located in this region.

131. **Ligature of External Carotid.**—Gaetano's patient had been stabbed in the throat, the knife passing through the parotid gland into the pharynx. It was impossible to tell which vessel had been injured in the deep wound. To arrest the hemorrhage, a ligature was thrown around the external carotid through an incision along the anterior margin of the sternocleido muscle. The desired result was attained and the patient rapidly recovered.

132. **Relations Between Pyogenic Affections.**—Balduzzi relates a large number of instances from his own experience in which various members of a family were attacked by erysipelas, follicular tonsillitis or acute articular rheumatism almost simultaneously. One member of the family would have the tonsillitis, while the others soon after would present articular rheumatism or erysipelas of the face. In 2 cases, an abscess in the lower left lung, following pneumonia, was followed about a month later by acute articular rheumatism. In another, an abscess in the axilla was the similar precursor of rheumatism soon after. In one family, the mother had erysipelas and her child follicular tonsillitis, commencing almost simultaneously, while the nurse followed with tonsillitis three days later. Two brothers presented the lesions of erythema nodosum almost simultaneously, one of them having just recovered from a catarrhal sore throat. The relations between these various pyogenic affections are unmistakably evident in his account. They are all due to the same cause, he asserts, and are merely different manifestations of the same pyogenic micro-organisms. He is an ardent advocate of the Baccelli method of subcutaneous injection of carbolic acid in pyogenic infections, and he treated all the affections mentioned above by this means, alone or combined with sodium salicylate. The latter alone was never so efficient as the carbolic acid, which he regards as the specific, almost sovereign remedy for pyogenic infections. He has had no experience with serum treatment.

135. **Tuberculosis and Specific Treatment.**—Piera refers to a large number of patients completely cured of tuberculosis by serotherapy, and then discusses another series in which slight, if any, improvement followed the specific treatment. His experience has been much more favorable with the Maragliano serum than with others. It certainly neutralizes the action of the protein and toxalbumin toxins of the tubercle bacillus, but he is convinced that not all the toxins secreted by the tubercle bacillus are capable of creating antitoxins. Those bacilli which possess large quantities of the toxin "necrosin" still exert a toxic action, notwithstanding that their protein and toxalbumin elements are neutralized by the antitoxin which their presence elicits. This class of bacilli are unconquerable by the phagocytes, and thus the tuberculous process is uninfluenced by the serotherapy. These are the bacilli that take stains particularly well. Those that stain feebly, on the other hand, succumb in the struggle with the phagocytes, and the patient recovers.

136. **Ludwig's Angina.**—Pozzolo reports 3 cases of cellulitis of the sublingual and submaxillary regions. The affection in each originated in a carious tooth. One was treated with antistreptococcus serum, with promptly favorable results.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

SYSTEM OF PHYSIOLOGIC THERAPEUTICS, Under the General Editorial Charge of S. Solis-Cohen. Vol. VII—Mechanotherapy and Physical Education, Including Massage and Exercise, by J. K. Mitchell, M.D., and Physical Education by Muscular Exercise by L. H. Gulick, M.D. Pp. 420. With 229 Illustrations. Vol. VIII—Rest, Mental Therapeutics, Suggestion, by F. X. Dercum, M.D., Ph.D. Pp. 332. Vol. XI—Serumtherapy, by J. McFarland; Organotherapy, O. T. Osborne, M.A., M.D.; Radium, Thorum and Radioactivity, by S. G. Tracy, B. Sc., M.D.; Counterirritation, External Appplications, Bloodletting, F. A. Packard, M.D. An Outline of the Principles of Therapeutics, with Especial Reference to Physiologic Therapeutics by the Editor and an Index-digest of the Complete System of Eleven Volumes. Illustrated. Pp. 388. Price, $2.50 per volume. Philadelphia: P. Blakiston's Son & Co. 1905.

A MANUAL OF ACUTE POISONING, Giving Classification, Varieties, and Individual Substances Usually Met with in Emergency Poisoning, etc., Together with Methods for Use in First Aid to the Injured. By J. W. Wainwright, M.D. Cloth. Pp. 96. Price $0.75. New York: E. R. Pelton, 1905.

COME POSSO MANTENERMI SANO E PROLUNGARMI LA VITA? Prof. Giovanni Galli, Assistente nella R Clinica medica di Roma. 2 Edizione Riveduta E. Aumentata Con 61 incisioni ed I Tavola colorata. Paper. Pp. 590. Price, 5½ lira ($1.05). Ulrico Hoepli, editore, Milano, 1905.

LE MALATTIE SESSUALI. Manuala ad Uso Dei Medici e degli Studenti di Medicina, Dr. Giovanni Franceschini, Direttore del Dispensario Celtico Governativo di Vicenza. Ulrico Hoepli, editore, Milan. Cloth. Pp. 64. Price 2½ lira ($0.48).

A LABORATORY GUIDE IN BACTERIOLOGY for the Use of Students, Teachers and Practitioners. By P. G. Heineman, Sc.B. Cloth. Pp. 143. Price, $1.50 net. Chicago: The University of Chicago Press, 1905.

IGIENE DEL SONNO. Dr. Guiseppe Antonelli, med. chir., ufficiale sanitario di Farnese. Con une tavola. Ulrico Hoepli, Editore, Milan, 1905. Cloth. Pp. 64. Price 2½ lira ($0.48).

SQUINT, Its Causes, Pathology and Treatment. By C. Worth, F.R.C.S. Second Edition. Cloth. Pp. 231. Price $2.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

## NEW PATENTS.

RECENT PATENTS OF INTEREST TO PHYSICIANS.

790353 Irrigator for urethral or other cavities. Everett S. Estlingen, San Francisco.
790626 Infusion device, Mary H. French, New York.
790527 Bandage roller, Ellis F. Frost, Washington, D. C.
790726 Chair, bed, couch, or the like for use in surgical operations or examinations, Pierre A. Gayon, Paris, France.
790359 Truss, George L. Gerard, New Haven, Conn.
790701 Sanitary appliance, James H. McCall, Columbia, Tenn.
790588 Invalid-bed, Wm. McLennan, Buffalo, N. Y.
790655 Medical ozonizer, Marius Otto, Paris, France.
790318 Atomizer, Walter Sams, Chicago, Ill.
790601 Making camphor, Karl Stephan and P. Hunsalz, Berlin, Germany.
791128 Ligature container, Perry S. Bauer, Chicago, Ill.
791322 Surgeons' needle holder, Henry Clayton, Philadelphia, Pa.
791354 Catamenial appliance, Mary S. Merkley, Brooklyn, N. Y.
791295 Invalid bed, Walter C. Sennett, Portland, Me.
790928 Emasculator, Oliver C. Sheppard, Centerville, S. D.
791058 Massage machine, George F. Trotter, Louisville, Ky.
791233 Treating rheumatic or other diseases, Casimir Wolpers, Chicago, Ill.
791232 Apparatus for treating rheumatic or other diseases, Casimir Wolpers and T. F. Barrett, Chicago, Ill.
791862 Sterilizer for barbers' use Ernest O. Bauer, Valatie, N. Y.
791863 Device for the production of the circulation of water in warm-water bags, Moriz Bauer, Vienna, Austria-Hungary.
791802 Hypodermic syringe, Justin De Lisle, New York.
791468 Nebulizer, Olin Q. Holman, Chicago, Ill.
791490 Sterilizer for surgical instruments, Jean Parmentier, Paris, France.
791840 Sterilizer, Henry W. C. Thomas, Valatie, N. Y.
792305 Hernial truss, Francis B. Allshouse, Chicago, Ill.
792407 Support for the treatment of injured legs, Wendel Emge, Hohentengen, Germany.
792227 Firemans' respirator, Wm. F. Merryman, Denver, Colo.
792148 Lotion, Ernesto Monteleone, Jersey City, N. J., and V. Cesareo, New York.
792230 Hot-air inhaler, Norman K. Morris, Denver, Colo.
792544 Sanitary sweeping compound, James Newman, Washington, D .C.
792162 Electric osteophone, La Forest Potter, New York.
792299 Syringe, Samuel M. Weaver, Cleveland, Ohio.

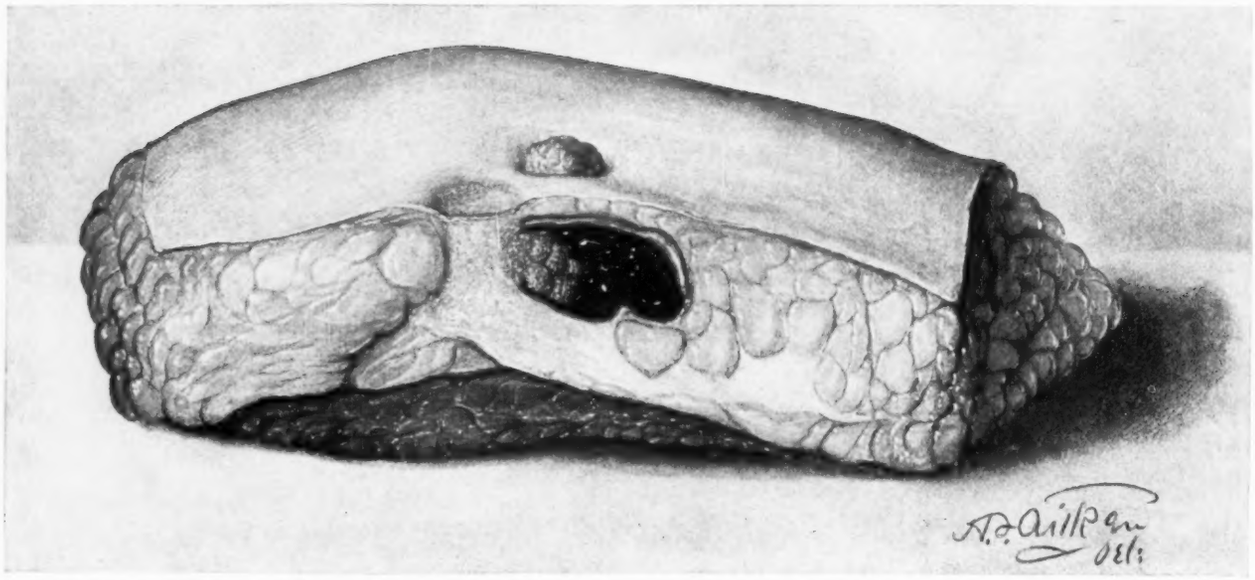

Fig. 1.—Adenocarcinoma and papillary cyst-adenoma. Gross appearances. (See oration on Surgery by Dr. Warren in this issue.)

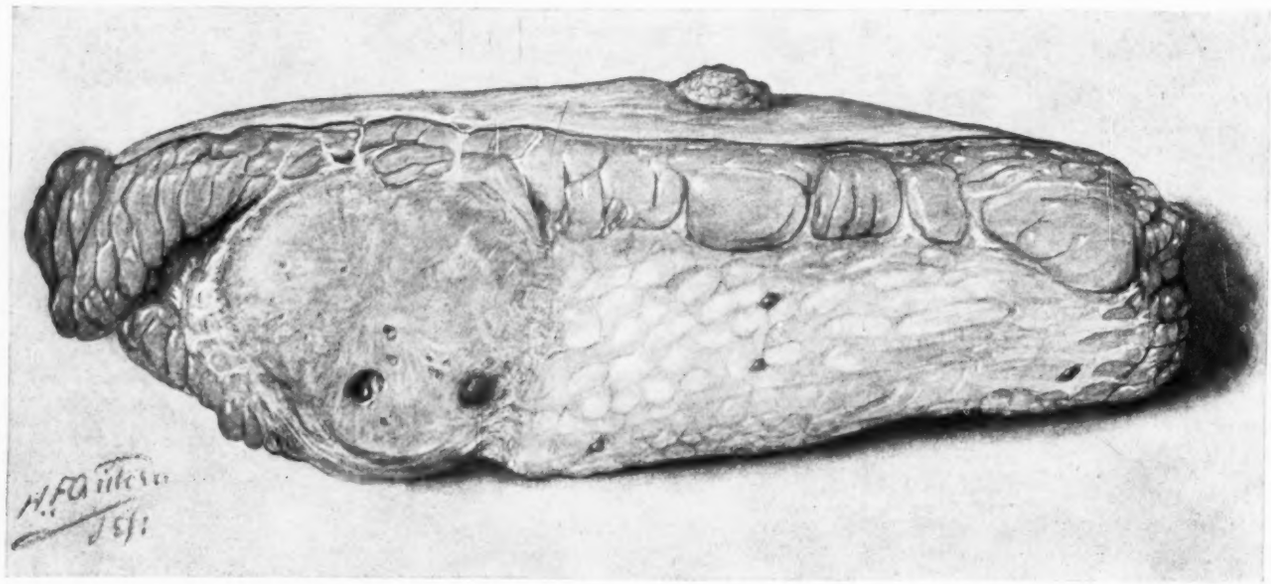

Fig. 2.—Adenocarcinoma and abnormal involution. Gross appearances.